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1990

GAS FACTS

Department of Statistics

1990 Data

A Statistical Record of the Gas Utility Industry

gas facts

1990 DATA

■ ENERGY RESERVES ■ NATURAL GAS SUPPLY
■ UNDERGROUND STORAGE
■ DISTRIBUTION AND TRANSMISSION
■ ENERGY CONSUMPTION
■ CUSTOMERS ■ SALES ■ REVENUES
■ PRICES ■ APPLIANCE AND HOUSING DATA
■ FINANCE ■ PERSONNEL DATA

■ GLOSSARY ■ INDEX

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GAS FACTS
1990 DATA

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AMERICAN GAS ASSOCIATION

The American Gas Association assumed its present status as the gas utility industry trade association in 1927, after a merger of two predecessor organizations. It renders assistance to the gas utility industry so that the industry may serve its customers more efficiently. Dependence is placed upon the voluntary cooperation of gas companies and established committees composed of representatives from these companies.

The Association recognizes the need for factual information regarding the gas industry for the use, not only of industry organizations, but also interested outside publics. Its statistical efforts are a vital part of this function. and the publication of Gas Facts is one result of these efforts. The statistical activities of A.G.A. are performed by the Department of Statistics with guidance by the Statistics and Load Forecast Methods Committee.

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INTRODUCTION

GENERAL

This publication contains detailed statistics for 1990 and summary statistics for 1975–1989 for the gas utility industry which by definition, consists of the companies engaged in natural gas distribution and transmission. The publication also contains relevant data on the gas producing segment of the industry and key statistics on other energy industries.

Production data of the gas industry, and pertinent other energy industry data, are also included. Gas volumes are expressed in millions of cubic feet (at 14.73 psia and 60°F unless otherwise noted) and in British thermal units (Btu) to permit direct comparison with other energy data. A conversion table is included as Appendix B.

Appendix C contains a sample listing of gas utility companies according to their classification as distribution, transmission, integrated, or in some cases, combination companies. These classifications are defined in the glossary, Appendix A. Appendix D contains consumption data gathered by the Gas Requirements Committee. Throughout the publication totals may not add due to independent rounding.

The user should be aware that there has developed a sizeable transportation market which directly affects gas utility sales quantities, revenues and number of customers. Although total pipeline throughput may remain the same, as transportation volumes to end-users increase, gas utility sales quantities to end-users will decrease.

Data presented in *Gas Facts,* broken down by company type, are not necessarily comparable from year to year. Acquisitions, mergers and corporate reorganizations continue to cause the number of companies in any given category to vary from year to year. Some of these changes are sizeable and can cause a dramatic shift in the data reported for a specific category from year to year.

SOURCES OF INFORMATION

Most of the information contained in this volume is developed from data contained in the Uniform Statistical Report, a detailed information form prepared annually by both electric and gas utility companies. Information is also derived from reports filed with regulatory commissions, from financial publications, and from statistical reports prepared by government and private agencies. For 1990, the gas utility companies participating in the Uniform Statistical Report survey represented 98 percent of total gas utility industry sales. Data for non-reporting companies, whose sales represent the remaining 2 percent, were estimated based on recent historical experience.

Employee accident data were taken from the A.G.A. *Disabling Injury Experience of the Gas Utility Industry* report and the National Safety Council *Accident Facts.* Estimates of proved reserves of natural gas, natural gas liquids and petroleum were taken from the U.S. Department of Energy report *U.S. Crude Oil, Natural Gas and Natural Gas Liquids Reserves,* 1990 annual report. Since this time series only begins in 1977, A.G.A., API and CPA data on natural gas reserves, 1960–1979, are presented. Statistics on underground storage operations were developed by the A.G.A. Committee on Underground Storage. Data for gas spaceheating customers were taken from the A.G.A. *Residential Gas Market Survey.* Data on new security issues, as well as related cost and yield data, were derived from various financial publications, supplemented by data provided in the Uniform Statistical Report.

ACKNOWLEDGEMENTS

Our thanks go to those companies participating in the Uniform Statistical Report information gathering effort. Their cooperation and support are the essential elements which have made this publication a primary source of gas utility industry data, and an important industry reference. The cooperation of the public and governmental agencies credited in tables is also greatly appreciated.

Credit also goes to Associate Director, Statistical Services Ellen Hahn, Manager, Statistical Services Linda Martin, Project Statisticians Carole Williams-Hopkins and Vanessa Chu, and Supply and Statistics Secretary Lisa Ramey. Also contributing to the effort were the A.G.A. Computer Services and Publications/Graphic Services Departments; and Bob Kalisch—Director, Gas Supply and Statistics.

SECTION 1
1990 IN REVIEW

Natural gas production in 1990 rose slightly more than one percent over 1989 and reached its highest level since 1984. Imports of gas, primarily from Canada, reached a record level of 1.4 Tcf. Gas well completions in 1990 decreased 18.0 percent compared with the 1989 level.

Total proved reserves at year-end 1990 were 169.3 Tcf, up from the 167.1 Tcf level at year-end 1989. Overall, proved reserves of natural gas in the lower-48 states were 1.2 percent higher in 1990 than they were in 1989. Replacement of natural gas production by reserve additions was 108.9 percent in 1990 as compared to the ten year average of 94 percent of production.

Distribution and transmission facilities increased in 1990 to 1,206.3 thousand miles of distribution main and pipeline, while storage capacity was approximately 7.8 Tcf. Thus the gas utility industry's deliverability capacity continues to be matched to the steadily expanding number of gas customers. Average gas utility customers increased in 1990 to 54,292,600.

Gas utility sales decreased 6.7% in 1990 to 9,846.3 trillion Btu. Residential sales decreased 6.8%, commercial sales decreased 5.5% and industrial sales declined 7.2% from 1989 levels.

Reported gas utility transportation deliveries to end-users totaled 4,308.6 trillion Btu in 1990, up 15.4 percent from 1989.

The average retail natural gas price increased 2.0% in 1990 compared with 1989. The residential price increased 2.6%, commercial price rose 1.5% and the industrial price increased 0.3%.

TABLE 1-1
COMPARISON OF GAS UTILITY INDUSTRY CUSTOMERS, SALES, REVENUES AND PRICES BY CLASS OF SERVICE, 1989 AND 1990

	1990	1989^R	Percentage Change
CUSTOMERS—TOTAL[a]	**54,292,600**	**53,356,000**	+ **1.8**
Residential	49,830,200	48,980,400	+ 1.7
Commercial	4,248,500	4,160,700	+ 2.1
Industrial	166,000	167,700	− 1.0
Other	47,900	47,200	+ 1.5
SALES—TOTAL[b]	**9,846,300**	**10,551,100**	− **6.7**
Residential	4,471,400	4,798,000	− 6.8
Commercial	2,193,300	2,321,800	− 5.5
Industrial	3,010,500	3,243,400	− 7.7
Other	171,100	187,900	− 8.9
REVENUES—TOTAL[c]	**$45,173,901**	**$47,493,381**	− **4.9**
Residential	25,013,880	26,171,772	− 4.4
Commercial	10,609,970	11,074,360	− 4.2
Industrial	8,996,743	9,665,710	− 6.9
Other	553,308	581,539	− 4.9
PRICES—TOTAL[d]	**$4.59**	**$4.50**	+ **2.0**
Residential	5.59	5.45	+ 2.6
Commercial	4.84	4.77	+ 1.5
Industrial	2.99	2.98	+ 0.3
Other	3.24	3.10	+ 4.5

a. Yearly averages.
b. Sales quantities in billions of Btu.
c. Revenues in thousands of dollars.
d. Prices in dollars per million Btu.
R-Revised.

SECTION 2
ENERGY RESERVES

Prior to 1980, data on reserves of oil, natural gas and gas liquids were taken from *Reserves of Crude Oil, Natural Gas Liquids, and Natural Gas in the United States and Canada,* an annual report published jointly by A.G.A., the American Petroleum Institute (API) and the Canadian Petroleum Association (CPA). The publication of this report was discontinued after the year-end 1979 report was released in June, 1980. Since 1977, however, the Energy Information Administration (EIA) within the Department of Energy has published an annual reserves report. Data listed below and in several of the tables in this section were taken from the EIA series. For years prior to 1980 A.G.A./API/CPA data are also listed for natural gas reserves.

Reserves as of December 31

	1990	% Change 90/89
Natural Gas		
(Billions of cubic feet)		
Total Proved Reserves	169,346	+ 1.3
% of Non-Associated, estimated	84.0	
% of Associated-Dissolved, estimated	16.0	
Underground Storage*	5,427	+ 3.6
Total Discoveries	12,368	+ 23.3
Production	17,233	+ 1.5
Natural Gas Liquids		
(Millions of barrels)		
Total Proved Reserves	7,586	− 2.4
Total Discoveries	415	− 0.2
Production	732	+ 0.1
Crude Oil		
(Millions of barrels)		
Total Proved Reserves	26,254	− 0.9
Total Discoveries	689	− 3.8
Production	2,505	− 3.1

*Not included in Total Reserves. Data taken from "The Underground Storage of Gas in the United States and Canada."

CHART 1-1

SELECTED GAS INDUSTRY HIGHLIGHTS OF 1990

	1990
Proved Reserves	169.3Tcf
Customers	54.3 Million
Utility Sales	9.8 Quads
Wellhead Price	$1.72/Mcf
Resale Price	$3.54/MMBtu
End Use Price	$4.59/MMBtu
Miles of Main	1,206,274
Withdrawals from Storage	1.7 Tcf

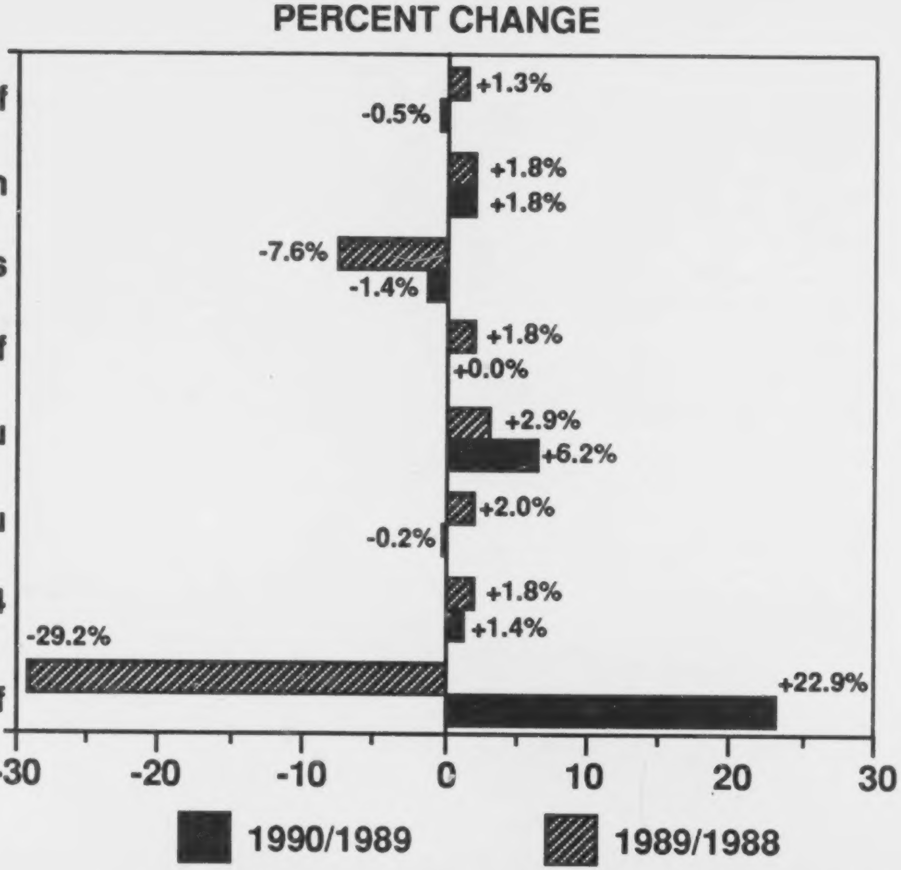


TABLE 2-1
SUMMARY OF ANNUAL ESTIMATES OF PROVED RESERVES OF NATURAL GAS IN THE UNITED STATES, 1960–1979[a]

(Millions of Cubic Feet)

	Changes in Reserves during year										
Year	Extensions	Extensions and Revisions	Revisions	New Field Discoveries	Discoveries of New Fields and New Pools in Old Fields	New Reservoir Discoveries	Total of Discoveries, Revisions and Extensions	Net Change in Underground Storage	Preliminary Net Production during Year[c]	Estimated Proved Reserves as of End of Year	Change over Previous Year
1960	—	7,293,015	—	—	6,600,963	—	13,893,978	281,273	13,019,356	262,326,326	1,155,895
1961	—	10,258,692	—	—	6,907,729	—	17,166,421	159,544	13,378,649	266,273,642	3,947,316
1962	—	13,184,794	—	—	6,299,164	—	19,483,958	159,231	13,637,973	272,278,858	6,005,216
1963	—	12,586,733	—	—	5,577,934	—	18,164,667	253,733	14,546,025	276,151,233	3,872,375
1964	—	13,342,838	—	—	6,909,301	—	20,252,139	195,110	15,347,028	281,251,454	5,100,221
1965	—	14,775,570	—	—	6,543,709	—	21,319,279	150,483	16,252,293	286,468,923	5,217,469
1966	9,224,745	—	4,937,962	2,947,329	—	3,110,396	20,220,432	134,523	17,491,073	289,332,805	2,863,882
1967	9,538,584	—	6,570,578	3,170,520	—	2,524,651	21,804,333	151,403	18,380,838	292,907,703	3,574,898
1968	7,758,821	—	3,016,146	1,376,429	—	1,545,612	13,697,008	118,569	19,373,428	287,349,852	(5,557,851)
1969	5,800,489	—	(1,238,261)	1,769,557	—	2,043,219	8,375,004	107,169	20,723,190	275,108,835	(12,241,017)
1970	6,158,168	—	(99,721)	27,770,223[b]	—	3,367,689	37,196,359	402,018	21,960,804	290,746,408	15,637,573
1971	6,374,706	—	(1,227,400)	1,317,574	—	3,360,541	9,825,421	310,301	22,076,512	278,805,618	(11,940,790)
1972	6,153,683	—	(1,077,791)	1,462,539	—	3,096,132	9,634,563	156,563	22,511,898	266,084,846	(12,720,772)
1973	6,177,286	—	(3,474,756)	2,152,151	—	1,970,368	6,825,049	(354,282)	22,605,406	249,950,207	(16,134,639)
1974	5,847,251	—	(1,333,285)	2,013,745	—	2,151,473	8,679,184	(178,424)	21,318,470	237,132,497	(12,817,410)
1975	6,027,433	—	383,449	2,423,382	—	1,649,424	10,483,688	302,561	19,718,570	228,200,176	(8,932,321)
1976	5,337,707	—	(1,197,119)	1,421,013	—	1,993,867	7,555,468	(187,550)	19,542,020	216,026,074	(12,174,102)
1977	6,601,229	—	983,551	2,114,505	—	2,152,639	11,851,924	446,930	19,447,050	208,877,878	(7,148,196)
1978	6,733,441	—	118,436	1,719,938	—	2,014,329	10,586,144	148,733	19,311,048	200,301,707	(8,576,171)
1979	7,113,113	—	2,907,551	2,575,779	—	1,689,504	14,285,947	239,323	19,910,353	194,916,624	(5,385,083)

a. Volumes are calculated at a pressure base of 14.73 psi, absolute, and at a standard temperature of 60°F.

b. Includes the estimates of proved reserves in the Prudhoe Bay Permo-triassic reservoir discovered in 1968 and not previously included.

c. "Preliminary Net Production" equals estimated gross withdrawals less (1) gas reinjected into producing reservoirs for cycling and pressure maintenance, and (2) natural gas liquids. "Preliminary Net Production" differs from U.S. Bureau of Mines "Marketed Production" in that (1) the sources from which they are derived are different, and (2) "Marketed Production" includes natural gas liquids.

( ): Denotes negative value.

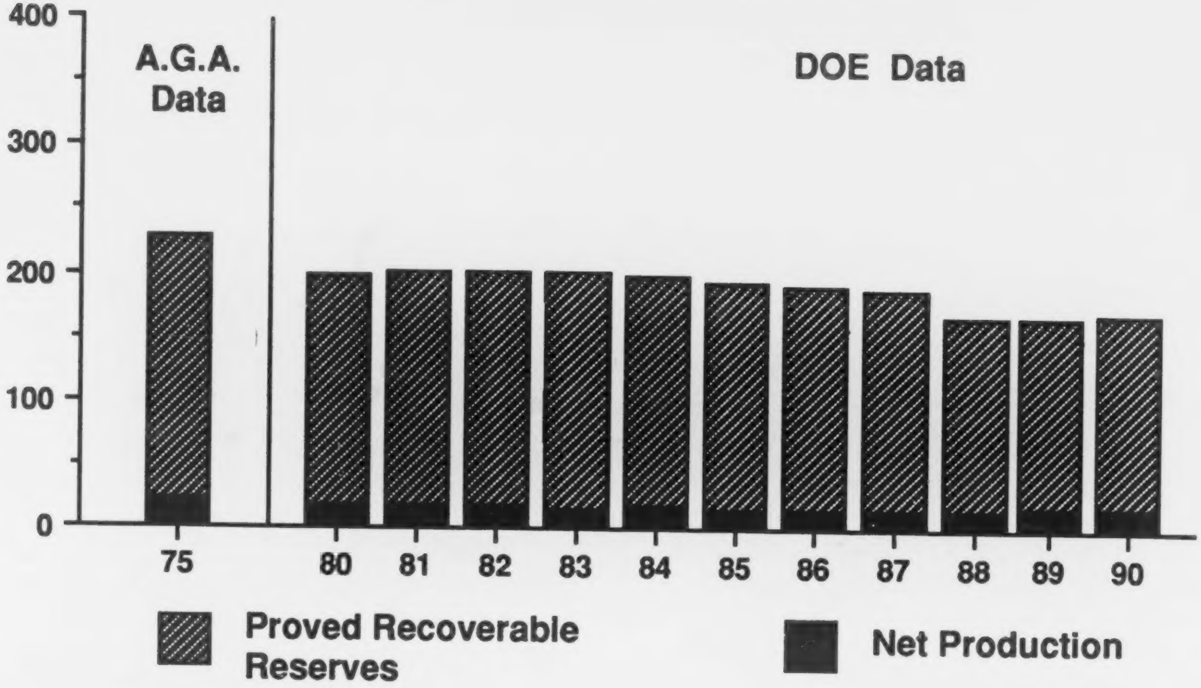
Source: A.G.A., American Petroleum Institute and Canadian Petroleum Association. *Reserves of Crude Oil, Natural Gas in the United States and Canada as of December 31, 1979.*

Note: Publication of the above mentioned source ceased with the December 31, 1979 edition. See Table 2-2 for EIA information covering 1976-1989.

CHART 2-1

PROVED RECOVERABLE RESERVES & NET PRODUCTION OF NATURAL GAS IN THE UNITED STATES

(TRILLIONS OF CUBIC FEET)



REFERENCE: TABLES 2-1, 2-2

TABLE 2-2

SUMMARY OF ANNUAL ESTIMATES OF PROVED RESERVES OF NATURAL GAS IN THE UNITED STATES, 1976–1990

(Billions of Cubic Feet)

	Changes in Reserves During Year									
Year	Net of Corrections and Adjustments (1)	Revision Increases (2)	Revision Decreases (3)	Extensions to Old Reservoirs (4)	New Reservoir Discoveries in Old Fields (5)	New Field Discoveries (6)	Total Discoveries[a] (7)	Production Dry (8)	Proved Reserves[b] 12/31 (9)	Net Change From Prior Year (10)
1976	—	—	—	—	—	—	—	—	213,278[c]	—
1977	(20)[d]	13,691	15,296	8,129	3,301	3,173	14,603	18,843	207,413	(5,865)
1978	2,429	14,969	15,994	9,582	4,579	3,860	18,021	18,805	208,033	620
1979	(2,264)	16,410	16,629	8,950	2,566	3,188	14,704	19,257	200,997	(7,036)
1980	1,201	16,972	15,923	9,357	2,577	2,539	14,473	18,699	199,021	(1,976)
1981	1,627	16,412	13,813	10,491	2,998	3,731	17,220	18,737	201,730	2,709
1982	2,378	19,795	19,340	8,349	3,419	2,687	14,455	17,506	201,512	(218)
1983	3,090	17,602	17,617	6,909	2,965	1,574	11,448	15,788	200,247	(1,265)
1984	(2,241)	17,841	14,712	8,299	2,686	2,536	13,521	17,193	197,463	(2,784)
1985	(1,708)	18,775	16,304	7,169	2,960	999	11,128	15,985	193,369	(4,094)
1986	1,320	21,269	17,697	6,065	1,771	1,099	8,935	15,610	191,586	(1,783)
1987	1,268	17,527	14,231	4,587	1,499	1,089	7,175	16,114	187,211	(4,375)
1988	2,193	23,367	38,427[e]	6,803	1,909	1,638	10,350	16,670	168,024[e]	(19,187)
1989	3,013	26,673	23,643	6,339	2,243	1,450	10,032	16,983	167,116	(908)
1990	1,557	18,981	13,443	7,952	2,412	2,004	12,368	17,233	169,346	2,230

a. Col. 4 + Col. 5 + Col. 6 = Col. 7.
b. Proved reserves = Prior year Col. 9 + Col. 1 + Col. 2 − Col. 3 + Col. 7 − Col. 8.
c. Based on following year data only.
d. Consists only of reported corrections.
e. An unusually large revision decrease to North Slope dry natural gas reserves was made in 1988.

Note: "Old" means discovered in a prior year. "New" means discovered during the report year.

Source: U.S. Department of Energy, Energy Information Administration, *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves*, 1990 Annual Report.

TABLE 2-3
CHANGES IN ESTIMATED PROVED RESERVES OF NATURAL GAS, IN THE UNITED STATES BY STATE, DURING 1990[a]

(Billions of Cubic Feet)

State and Subdivision	Published Proved Reserves 12/31/89	Changes in Reserves During 1990		
		Net of Corrections and Adjustments	Revision Increases	Revision Decreases
(1) Total United States	**167,116**	**1,557**	**18,981**	**13,443**
(2) Alabama Onshore	2,761	197	759	938
(3) Alaska	8,939	(320)	1,065	99
(4) Arkansas	1,772	94	100	118
(5) California	3,374	(40)	186	144
(6) Coastal Region Onshore	222	5	32	34
(7) Los Angeles Basin Onshore	137	(29)	13	5
(8) San Joaquin Basin Onshore	2,784	11	136	96
(9) State Offshore	231	(27)	5	9
(10) Colorado	4,274	3	394	455
(11) Florida	46	3	4	1
(12) Kansas	10,091	(83)	372	313
(13) Kentucky	992	(31)	93	19
(14) Louisiana	12,516	(15)	1,568	1,663
(15) North	2,652	92	376	306
(16) South Onshore	8,645	30	1,076	1,233
(17) State Offshore	1,219	(137)	116	124
(18) Michigan	1,342	3	87	170
(19) Mississippi	1,104	82	163	142
(20) Montana	867	29	34	32
(21) New Mexico	15,434	342	1,171	491
(22) East	3,075	138	512	283
(23) West	12,359	204	659	208
(24) New York	368	(43)	56	26
(25) North Dakota	561	56	59	50
(26) Ohio	1,275	42	34	16
(27) Oklahoma	15,916	838	1,803	1,542
(28) Pennsylvania	1,642	191	167	206
(29) Texas	38,381	97	4,685	3,045
(30) District 1	1,267	(216)	125	119
(31) District 2 Onshore	1,770	114	191	186
(32) District 3 Onshore	3,233	(132)	349	278
(33) District 4 Onshore	7,111	235	851	621
(34) District 5	1,845	44	180	115
(35) District 6	5,614	251	418	357
(36) District 7B	459	143	13	19
(37) District 7C	3,180	163	471	197
(38) District 8	6,753	211	821	622
(39) District 8A	1,074	(89)	141	28
(40) District 9	703	84	46	35
(41) District 10	4,767	(602)	1,022	386
(42) State Offshore	605	(109)	57	82
(43) Utah	1,507	8	112	101
(44) Virginia	217	(77)	4	6
(45) West Virginia	2,201	(11)	227	91
(46) Wyoming	10,744	(629)	743	543
(47) Federal Offshore[b]	30,709	829	5,089	3,227
(48) Miscellaneous[c]	83	(8)	6	5

a. Volumes are calculated at a pressure base 14.73 psi, absolute, and at a standard temperature of 60°F.
b. Includes offshore Alabama, Pacific (California), Gulf of Mexico (Louisiana), and Gulf of Mexico (Texas).
c. Includes Arizona, Illinois, Indiana, Maryland, Missouri, Nebraska, Nevada, Oregon, South Dakota, and Tennessee.
d. Indicates that the estimate is associated with a sampling error (95 percent confidence interval) that exceeds 20 percent of the estimated value.

Note: "Old" means discovered in a prior year. "New" means discovered during the report year.

Source: U.S. Department of Energy, Energy Information Administration, *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves,* 1990 Annual Report.

TABLE 2-3 (Continued)
CHANGES IN ESTIMATED PROVED RESERVES OF NATURAL GAS, IN THE UNITED STATES BY STATE, DURING 1990

(Billions of Cubic Feet)

Changes in Reserves During 1990					
Extensions	New Field Discoveries	New Reservoir Discoveries In Old Fields	Production	Proved Reserves 12/31/90	
7,952	**2,004**	**2,412**	**17,233**	**169,346**	**(1)**
1,014	433	3	104	4,125	(2)
54	0	0	339	9,300	(3)
35	3	9	164	1,731	(4)
68	2	32	293	3,185	(5)
15	0	0	23	217	(6)
0	0	0	10	106	(7)
53	2	32	259	2,670	(8)
0	0	0	8	192	(9)
562	2	4	229	4,555	(10)
0	0	0	7	45	(11)
68	1	1	523	9,614	(12)
42	0	1	62	1,016	(13)
674	3	241	1,596	11,728	(14)
121	3	31	381	2,588	(15)
538	0	185	1,070	8,171	(16)
15	0	25	145	969	(17)
40	39	22	120	1,243	(18)
20	21	19	141	1,126	(19)
40	0	9	48	899	(20)
1,667	18	6	887	17,260	(21)
183	18	5	392	3,256	(22)
1,484	0	1	495	14,004	(23)
17	0	0	18	354	(24)
16	0	2	58	586	(25)
1	0	5	127	1,214	(26)
707	50	437	2,058	16,151	(27)
78	6	2	160	1,720	(28)
1,762	203	587	4,478	38,192	(29)
128	1	23	161	1,048	(30)
49	26	27	254	1,737	(31)
136	19	41	474	2,894	(32)
621	31	322	1,075	7,475	(33)
77	2	2	160	1,875	(34)
156	74	131	534	5,753	(35)
6	0	0	80	522	(36)
196	2	0	301	3,514	(37)
110	2	2	663	6,614	(38)
4	2	2	70	1,036	(39)
84	0	0	106	776	(40)
168	8	5	492	4,490	(41)
27	36	32	108	458	(42)
55	0	0	71	1,510	(43)
7	0	0	7	138	(44)
40	1	9	169	2,207	(45)
190	4	18	583	9,944	(46)
794	1,218	1,005	4,984	31,433	(47)
1	0	0	7[d]	70[d]	(48)

TABLE 2-5
CHANGES IN ESTIMATED PROVED RESERVES OF NATURAL GAS LIQUIDS, IN THE UNITED STATES BY STATE, DURING 1990

(Millions of Barrels)[a]

State and Subdivision	Published Proved Reserves 12/31/89	Changes In Reserves During 1990: Net of Corrections and Adjustments	Revision Increases	Revision Decreases
(1) Total United States	**7,769**	**(83)**	**827**	**606**
(2) Alabama	168	9	17	15
(3) Alaska	380	(23)	0	0
(4) Arkansas	9	1	0	0
(5) California	113	(5)	7	5
(6) Coastal Region Onshore	11	1	2	2
(7) Los Angeles Basin Onshore	4	0	1	0
(8) San Joaquin Basin Onshore	95	(5)	4	3
(9) State Offshore	3	(1)	0	0
(10) Colorado	209	(37)	20	22
(11) Florida	10	(2)	1	0
(12) Kansas	329	(4)	13	11
(13) Kentucky	16	7	2	0
(14) Louisiana	522	40	83	77
(15) North	60	1	9	7
(16) South Onshore	411	37	66	62
(17) State Offshore	51	2	8	8
(18) Michigan	97	(10)	6	11
(19) Mississippi	12	1	2	3
(20) Montana	16	(1)	1	1
(21) New Mexico	933	(8)	81	39
(22) East	196	21	39	27
(23) West	737	(29)	42	12
(24) North Dakota	59	6	5	5
(25) Oklahoma	654	30	79	71
(26) Texas	2,563	38	340	210
(27) District 1	25	5	4	5
(28) District 2 Onshore	72	15	10	10
(29) District 3 Onshore	213	(19)	21	23
(30) District 4 Onshore	260	18	35	28
(31) District 5	88	0	8	11
(32) District 6	266	(12)	19	19
(33) District 7B	73	14	2	3
(34) District 7C	238	2	41	14
(35) District 8	554	34	70	52
(36) District 8A	332	2	49	9
(37) District 9	94	11	7	5
(38) District 10	342	(34)	74	30
(39) State Offshore	6	2	0	1
(40) Utah and Wyoming	896	(58)	56	50
(41) West Virginia	100	(14)	9	4
(42) Federal Offshore[b]	678	(51)	105	82
(43) Miscellaneous[c]	5	(2)	0	0

a. Barrel = 42 U.S. gallons.
b. Includes Pacific (California), Gulf of Mexico (Louisiana), and Gulf of Mexico (Texas).
c. Includes Arizona, Illinois, Indiana, Maryland, Missouri, Nebraska, New York, Ohio, Oregon, Pennsylvania, South Dakota, Tennessee, and Virginia.

Source: U.S. Department of Energy, Energy Information Administration, *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves*, 1990 Annual Report.

TABLE 2–5 (Continued)
CHANGES IN ESTIMATED PROVED RESERVES OF NATURAL GAS LIQUIDS, IN THE UNITED STATES BY STATE, DURING 1990

(Millions of Barrels)[a]

Changes in Reserves During 1990					
Extensions	New Field Discoveries	New Reservoir Discoveries in Old Fields	Production	Proved Reserves 12/31/90	
299	**39**	**73**	**732**	**7,586**	**(1)**
5	0	0	14	170	(2)
1	0	0	18	340	(3)
0	0	0	1	9	(4)
3	0	1	9	105	(5)
1	0	0	1	12	(6)
0	0	0	0	5	(7)
2	0	1	8	86	(8)
0	0	0	0	2	(9)
10	0	0	11	169	(10)
0	0	0	1	8	(11)
3	0	0	17	313	(12)
1	0	0	1	25	(13)
32	0	12	74	538	(14)
4	0	0	9	58	(15)
27	0	10	58	431	(16)
1	0	2	7	49	(17)
3	2	1	7	81	(18)
0	0	0	1	11	(19)
1	0	0	1	15	(20)
73	1	0	51	990	(21)
19	1	0	27	222	(22)
54	0	0	24	768	(23)
1	0	0	6	60	(24)
30	2	17	84	657	(25)
101	11	19	287	2,575	(26)
2	0	0	3	26	(27)
3	1	1	12	80	(28)
16	1	2	30	181	(29)
22	2	11	41	279	(30)
3	0	0	7	81	(31)
7	5	4	23	247	(32)
1	0	0	11	76	(33)
13	0	0	24	256	(34)
9	0	0	57	558	(35)
2	1	1	24	354	(36)
11	0	0	14	104	(37)
12	1	0	37	328	(38)
0	0	0	2	5	(39)
18	0	1	51	812	(40)
2	0	0	7	86	(41)
15	23	22	91	619	(42)
0	0	0	0	3	(43)

TABLE 2-6
TOTAL ESTIMATED REMAINING IDENTIFIED RESERVES OF COAL AND LIGNITE BY STATE, AS OF JANUARY 1, 1990

(Billions of Short Tons)

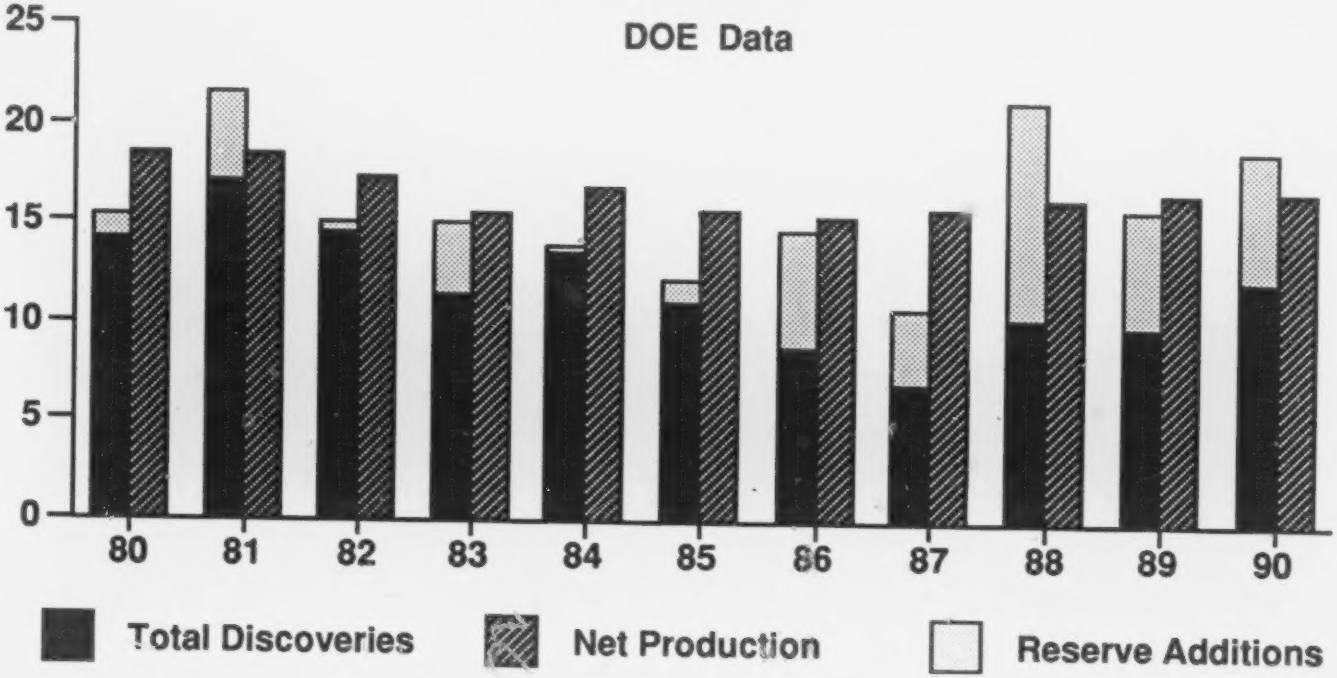
State	Total Coal and Lignite	Coal			Lignite
		Anthracite and Semianthracite	Subbituminous	Bituminous	
United States	**471.5**	**7.3**	**179.6**	**239.6**	**45.1**
Alabama	4.9	—	—	3.8	1.1
Alaska	6.1	—	5.4	0.7	a
Arizona	0.3	—	—	0.3	—
Arkansas	0.4	0.1	—	0.3	a
Colorado	17.0	a	3.9	8.9	4.2
Georgia	a	—	—	a	—
Idaho	a	—	—	a	—
Illinois	78.3	—	—	78.3	—
Indiana	10.2	—	—	10.2	—
Iowa	2.2	—	—	2.2	—
Kansas	1.0	—	—	1.0	—
Kentucky	29.6	—	—	29.6	—
Louisiana	0.5	—	—	—	0.5
Maryland	0.8	—	—	0.8	—
Michigan	0.1	—	—	0.1	—
Missouri	6.0	—	—	6.0	—
Montana	120.0	—	102.9	1.4	15.8
New Mexico	4.5	a	2.5	2.0	—
North Carolina	a	—	—	a	—
North Dakota	9.7	—	—	—	9.7
Ohio	18.5	—	—	18.5	—
Oklahoma	1.6	—	—	1.6	—
Oregon	a	—	a	—	—
Pennsylvania	29.2	7.1	—	22.1	—
South Dakota	0.4	—	—	—	0.4
Tennessee	0.9	—	—	0.9	—
Texas	13.4	—	—	—	13.4
Utah	6.2	—	a	6.2	—
Virginia	2.7	0.1	—	2.6	—
Washington	1.4	a	1.1	0.3	a
West Virginia	37.4	—	—	37.4	—
Wyoming	68.2	—	63.8	4.4	—

a. Less than 50 million short tons.
Source: U.S. Department of Energy, Energy Information Administration, *Coal Production 1989*.

CHART 2-2

NET PRODUCTION AND TOTAL DISCOVERIES OF GAS RESERVES

(TRILLIONS OF CUBIC FEET)



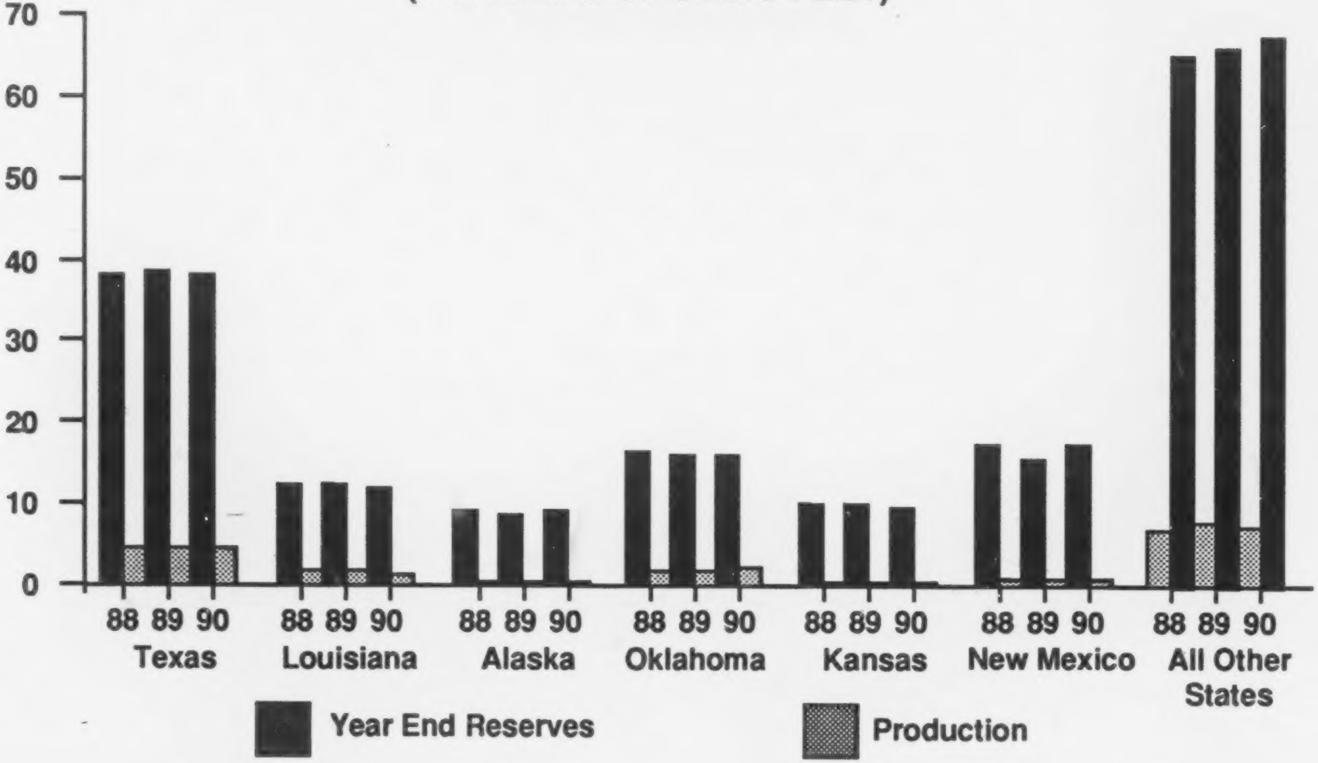
NOTE: DATA REPRESENT LOWER-48 STATES ONLY

REFERENCE: TABLES 2-1, 2-2

CHART 2-3

NATURAL GAS STATE RESERVES FOR 1988, 1989 & 1990

(TRILLIONS OF CUBIC FEET)



REFERENCE: TABLE 2-3

TABLE 2-4

SUMMARY OF ANNUAL ESTIMATES OF PROVED RESERVES OF NATURAL GAS LIQUIDS IN THE UNITED STATES, 1978–1990

(Millions of Barrels)[a]

Year	Net of Corrections and Adjustments (1)	Revision Increases (2)	Revision Decreases (3)	Extensions to Old Reservoirs (4)	New Reservoir Discoveries in Old Fields (5)	New Field Discoveries (6)	Total Discoveries[b] (7)	Production (8)	Proved Reserves[c] 12/31 (9)	Net Change From Prior Year (10)
1978	—	—	—	—	—	—	—	—	6,772[d]	—
1979	64[e]	677	726	364	97	94	555	727	6,615	(157)
1980	153	743	639	418	79	90	587	731	6,728	113
1981	231	729	643	542	91	131	764	741	7,068	340
1982	299	811	832	375	109	112	596	721	7,221	153
1983	849	847	781	321	99	70	490	725	7,901	680
1984	(123)	866	724	348	96	55	499	776	7,643	(258)
1985	426	906	744	337	85	44	466	753	7,944	301
1986	367	1,030	807	263	72	34	369	738	8,165	221
1987	231	847	656	213	55	39	307	747	8,147	(18)
1988	11	1,168	715	268	72	41	381	754	8,238	91
1989	(277)	1,143	1,020	259	74	83	416	731	7,769	(469)
1990	(83)	827	606	303	73	39	415	732	7,586	(183)

a. Barrel = 42 U.S. gallons.
b. Col. 4 + Col. 5 + Col. 6 = Col. 7.
c. Proved Reserves = Prior year Col. 9 + Col. 1 + Col. 2 − Col. 3 + Col. 7 − Col. 8.
d. Based on following year data only.
e. Consists only of reported corrections.

Note: "Old" means discovered in a prior year. "New" means discovered during the report year.

Source: U.S. Department of Energy, Energy Information Administration, *U.S. Crude Oil, Natural Gas and Natural Gas Liquids Reserves*, 1990 Annual Report.

TABLE 2-7

SUMMARY OF ANNUAL ESTIMATES OF PROVED RESERVES OF CRUDE OIL IN THE UNITED STATES, 1976–1990

(Millions of Barrels)[a]

Year	Net of Corrections and Adjustments (1)	Revision Increases (2)	Revision Decreases (3)	Extensions to Old Reservoirs (4)	New Reservoir Discoveries in Old Fields (5)	New Field Discoveries (6)	Total Discoveries[b] (7)	Production (8)	Proved Reserves[c] 12/31 (9)	Net Change From Prior Year (10)
1976	—	—	—	—	—	—	—	—	33,502[d]	—
1977	(40)[e]	1,503	1,117	496	130	168	794	2,862	31,780	(1,722)
1978	366	2,799	1,409	444	116	267	827	3,008	31,355	(425)
1979	337	2,438	2,001	424	104	108	636	2,955	29,810	(1,545)
1980	219	2,883	994	572	147	143	862	2,975	29,805	(5)
1981	138	2,151	880	750	157	254	1,161	2,949	29,426	(379)
1982	(83)	2,245	1,811	634	193	204	1,031	2,950	27,858	(1,568)
1983	462	2,810	1,299	629	190	105	924	3,020	27,735	(123)
1984	159	3,672	1,227	744	158	242	1,144	3,037	28,446	711
1985	429	3,037	1,439	742	169	84	995	3,052	28,416	(30)
1986	57	2,724	1,869	405	81	48	534	2,973	26,889	(1,527)
1987	233	3,687	1,371	484	111	96	691	2,873	27,256	367
1988	364	2,684	1,221	355	127	71	553	2,811	26,825	(431)
1989	213	2,698	1,365	514	90	112	716	2,586	26,501	(324)
1990	86	2,483	1,000	456	135	98	689	2,505	26,254	(247)

a. Barrel = 42 U.S. gallons.
b. Col. 4 + Col. 5 + Col. 6 = Col. 7.
c. Proved Reserves = Prior year Col. 9 + Col. 1 + Col. 2 − Col. 3 + Col. 7 − Col. 8.
d. Based on following year data only.
e. Consists only of reported corrections.

Note: "Old" means discovered in a prior year. "New" means discovered during the report year.

Source: U.S. Department of Energy, Energy Information Administration, *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves*, 1990 Annual Report.

TABLE 2-8
CHANGES IN ESTIMATED PROVED RESERVES OF CRUDE OIL, IN THE UNITED STATES BY STATE, DURING 1990

(Millions of Barrels)[a]

		Changes in Reserves During 1990		
State and Subdivision	Published Proved Reserves 12/31/89	Net of Corrections and Adjustments	Revision Increases	Revision Decreases
(1) Total United States	**26,501**	**86**	**2,483**	**1,000**
(2) Alabama	43	1	6	1
(3) Alaska	6,674	(65)	486	4
(4) Arkansas	66	1	9	10
(5) California	4,816	(17)	270	121
(6) Coastal Region Onshore	588	7	29	19
(7) Los Angeles Basin Onshore	342	(19)	33	13
(8) San Joaquin Basin Onshore	3,444	2	199	88
(9) State Offshore	442	(7)	9	1
(10) Colorado	359	(47)	22	8
(11) Florida	50	0	0	2
(12) Illinois	123	17	9	3
(13) Indiana	16[b]	(2)	0	0
(14) Kansas	338	11	28	13
(15) Kentucky	33	2	2	0
(16) Louisiana	745	(5)	130	78
(17) North	123	6	10	2
(18) South Onshore	479	(12)	86	65
(19) State Offshore	143	1	34	11
(20) Michigan	128	1	15	7
(21) Mississippi	218	12	35	23
(22) Montana	225	(4)	27	10
(23) Nebraska	32	3	6	10
(24) New Mexico	665	24	77	38
(25) East	619	10	75	33
(26) West	46	14	2	5
(27) North Dakota	246	31	47	18
(28) Ohio	56	17	2	1
(29) Oklahoma	789	(10)	120	83
(30) Pennsylvania	26	(1)	2	3
(31) Texas	6,966	21	754	244
(32) District 1	139	19	43	35
(33) District 2 Onshore	107	(5)	8	5
(34) District 3 Onshore	307	(13)	37	18
(35) District 4 Onshore	77	(8)	13	6
(36) District 5	46	(4)	10	3
(37) District 6	631	33	28	27
(38) District 7B	204	(1)	27	10
(39) District 7C	247	(3)	52	14
(40) District 8	2,151	(34)	235	56
(41) District 8A	2,754	18	273	52
(42) District 9	200	16	10	7
(43) District 10	97	4	18	10
(44) State Offshore	6	(1)	0	1
(45) Utah	246	4	35	17
(46) West Virginia	30	4	3	3
(47) Wyoming	825	14	86	51
(48) Federal Offshore[c]	2,747	61	309	248
(49) Miscellaneous[d]	39	13	3	4

a. Barrel = 42 U.S. gallons.

b. Indicates that the estimate is associated with a sampling error (95 percent confidence interval) which exceeds 20 percent of the estimated value.

c. Includes Pacific (California), Gulf of Mexico (Louisiana), and Gulf of Mexico (Texas).

d. Includes Arizona, Missouri, Nevada, New York, South Dakota, Tennessee, and Virginia.

Source: U.S. Department of Energy, Energy Information Administration, *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves*, 1990 Annual Report.

TABLE 2-6 (Continued)
CHANGES IN ESTIMATED PROVED RESERVES OF CRUDE OIL, IN THE UNITED STATES BY STATE, DURING 1990

(Millions of Barrels)[a]

Changes in Reserves During 1990					
Extensions	New Field Discoveries	New Reservoir Discoveries in Old Fields	Production	Proved Reserves 12/31/90	
456	**98**	**135**	**2,505**	**26,254**	**(1)**
1	1	1	8	44	(2)
85	0	0	652	6,524	(3)
1	1	0	8	60	(4)
26	0	1	317	4,658	(5)
8	0	0	25	588	(6)
0	0	0	27	316	(7)
18	0	1	242	3,334	(8)
0	0	0	23	420	(9)
6	0	2	29	305	(10)
0	0	0	6	42	(11)
2	0	0	17	131	(12)
0	0	0	2	12	(13)
6	0	4	53	321	(14)
0	0	0	4	33	(15)
13	1	12	113	705	(16)
3	1	1	22	120	(17)
8	0	8	69	435	(18)
2	0	3	22	150	(19)
2	0	1	16	124	(20)
8	4	0	27	227	(21)
2	0	0	19	221	(22)
0	0	0	5	26	(23)
19	0	1	61	687	(24)
18	0	1	57	633	(25)
1	0	0	4	54	(26)
16	0	3	40	285	(27)
0	0	0	9	65	(28)
9	1	2	94	734	(29)
0	0	0	2	22	(30)
200	8	40	639	7,106	(31)
110	2	12	38	252	(32)
1	0	1	16	91	(33)
6	0	9	53	275	(34)
1	1	1	12	67	(35)
5	0	0	7	47	(36)
3	0	0	63	605	(37)
3	0	1	26	198	(38)
18	1	0	27	274	(39)
30	1	1	176	2,152	(40)
19	0	15	180	2,847	(41)
1	0	0	27	193	(42)
3	0	0	13	99	(43)
0	3	0	1	6	(44)
0	0	0	19	249	(45)
0	0	0	3[b]	31[b]	(46)
7	3	1	91	794	(47)
53	79	67	263	2,805	(48)
0	0	0	8	43	(49)

ENERGY RESERVES

TABLE 2-10

ESTIMATED ESTABLISHED REMAINING MARKETABLE RESERVES OF NATURAL GAS IN CANADA, BY PROVINCE, 1990[a]

(Millions of Cubic Feet)

Province	Remaining Reserves December 31, 1989	Change During Year	Remaining Reserves At December 31, 1990		
			Total[b]	Net Non-associated	Associated/ Disolved
Canada	**96,984,808**	**(250,550)**	**96,734,257**	**84,529,241**	**12,205,016**
Total West Canada	**96,359,444**	**(227,692)**	**96,131,751**	**83,926,912**	**12,204,840**
Alberta	60,536,651	(556,364)	59,980,287	50,101,672	9,878,615
Arctic Islands	14,423,587	—	14,423,587	13,382,556	1,041,031
Br. Columbia	7,751,582	186,165	7,937,747	7,612,837	324,910
Mackenzie Delta	10,603,042	—	10,603,042	9,740,544	862,498
Mainland Territories	389,970	(2,627)	387,343	383,403	3,940
Saskatchewan	2,654,612	145,134	2,199,745	2,705,900	93,846
Total East Canada	**625,364**	**(22,857)**	**602,506**	**602,329**	**177**
Ontario	622,170	(22,219)	599,951	599,951	—
Other E. Canada	3,194	(638)	2,555	2,378	177

a. Volumes are calculated at a pressure base of 14.65 psia and at a standard temperature of 60°F.
b. Underground storage not included.
( ): Denotes negative volume.
Source: Same as Table 2–9.

TABLE 2-11

CHANGES IN ESTIMATED ESTABLISHED REMAINING MARKETABLE RESERVES OF NATURAL GAS IN CANADA, BY PROVINCE, DURING 1990[a]

(Millions of Cubic Feet)

Province	Remaining Reserves December 31, 1989	Gross Additions	Net Production[b]	Remaining Reserves December 31, 1990
Canada	**96,984,808**	**3,536,489**	**3,787,039**	**96,734,257**
Total West Canada	**96,359,444**	**3,530,384**	**3,758,076**	**96,131,751**
Alberta	60,536,651	2,628,985	3,185,349	59,980,287
Arctic Islands	14,423,587	—	—	14,423,587
Br. Columbia	7,751,582	598,318	412,153	7,937,747
Mackenzie Delta	10,603,042	—	—	10,603,042
Mainland Territories	389,970	—	2,627	387,343
Saskatchewan	2,654,612	303,081	157,947	2,199,745
Total East Canada	**625,364**	**6,105**	**28,962**	**602,506**
Ontario	622,170	6,105	28,324	599,951
Other E. Canada	3,194	—	638	2,555

a. Volumes are calculated at a pressure base of 14.65 psia and at a standard temperature of 60°F.
b. Includes net change in underground storage.
( ): Denotes negative volume.
Source: Same as Table 2-9.

SECTION 3
NATURAL GAS SUPPLY

	1990	% Change 90/89
Maximum Day Sendout (Trillions of Btu)	88.4	+ 1.4
Production (wet) (Trillions of Btu)	20,214	+ 2.3
Net Imports (Millions of cubic feet)	1,532,259	+10.9
Producing Gas Wells	264,558	+ 1.3
New Gas Well Completions	7,170	+16.5

*Percentage change based on preliminary data for both years.
**As estimated by the Energy Information Administration at year end.

Beginning in January 1985, the method of reporting oil and gas well completions changed significantly. Because a substantial time lag exists between the date a well is actually completed and the date a report on the well is received by the American Petroleum Institute (API), publishing data on an "as reported" basis does not accurately reflect the timing of completion activity. A new methodology involves reporting completions on the basis of when the completions occurred. However, in some cases, it can take over two years before a well completion is reported to the API and reflected in their published data.

As a result, well completion data may not necessarily be comparable from year to year due to the constant updating to the well completion data provided by the API.

For those tables where both total U.S. and individual state data are published, the individual state data are "as reported" and for recent periods may be subject to significant revision. The total U.S. figures reflect *estimates* by API of the number of completion reports which will ultimately be received.

Please refer to American Gas Association, *Gas Energy Review,* April 1986, Volume 14, Number 4 for further details.

SUPPLY

TABLE 3-1

ANNUAL PRODUCTION OF FOSSIL ENERGY RESOURCES, AND ELECTRICITY FROM HYDROPOWER AND NUCLEAR POWER, IN THE UNITED STATES, 1975-1990[a]

(Trillions of Btu)

Year	Natural Gas Wet (unprocessed)	Crude Petroleum	Bituminous Coal and Lignite	Anthracite Coal	Hydropower[b]	Nuclear[c]	Other[d]	Grand Total Energy
1975	22,014	17,729	14,990	e	3,155	1,900	72	59,860
1976	21,807	17,262	15,654	e	2,976	2,111	81	59,891
1977	21,892	17,454	15,755	e	2,333	2,702	82	60,218
1978	21,730	18,434	14,910	e	2,937	3,024	68	61,103
1979	22,362	18,104	17,539	e	2,931	2,776	89	63,801
1980	22,162	18,249	18,597	e	2,900	2,739	114	64,761
1981	22,006	18,146	18,376	e	2,758	3,008	127	64,421
1982	20,446	18,309	18,639	e	3,266	3,131	108	63,898
1983	18,714	18,392	17,246	e	3,527	3,203	133	61,215
1984	20,205	18,848	19,719	e	3,348	3,553	174	65,847
1985	19,147	18,992	19,325	e	2,939	4,149	213	64,765
1986	18,620	18,376	19,510	e	3,017	4,471	231	64,225
1987	19,264	17,675	20,142	e	2,593	4,906	244	64,823
1988	19,745	17,279	20,737	e	2,314	5,661	235	65,971
1989[R]	19,938	16,117	21,345	e	2,771	5,677	217	66,065
1990[P]	20,214	15,456	22,610	e	2,924	6,185	202	67,592

a. The 1990 unit heat values employed are: Anthracite, 11,122 Btu per pound; bituminous coal and lignite, 10,632 Btu per pound; petroleum approx. 5,800,000 Btu per barrel; natural gas dry 1,031 Btu per cubic foot; natural gas liquids obtained by using 90,976 Btu per gallon.

b. Hydropower output is converted to theoretical energy inputs calculated from national average heat rates for fossil-fueled steam-electric plants.

c. Nuclear power energy input conversion is calculated annually by the Energy Information Administration.

d. Includes geothermal power and electricity produced from wood and waste.

e. Included in "Bituminous Coal and Lignite."

R–Revised. P–Preliminary.

Source: Prior to 1977 U.S. Bureau of Mines, for 1977 and beyond, data taken from U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review.*

TABLE 3-2

ANNUAL PRODUCTION OF FOSSIL ENERGY RESOURCES, AND ELECTRICITY FROM HYDROPOWER AND NUCLEAR POWER, IN THE UNITED STATES, 1975-1990

(Percentage)

Year	Natural Gas Wet (unprocessed)	Crude Petroleum	Bituminous Coal and Lignite	Anthracite Coal	Hydropower	Nuclear	Other[a]	Grand Total Energy
1975	36.8	29.6	25.0	b	5.3	3.2	.1	100.0
1976	36.4	28.8	26.2	b	5.0	3.5	.1	100.0
1977	36.4	29.0	26.1	b	3.9	4.5	.1	100.0
1978	35.6	30.2	24.4	b	4.8	4.9	.1	100.0
1979	35.0	28.4	27.5	b	4.6	4.4	.1	100.0
1980	34.2	28.2	28.7	b	4.5	4.2	.2	100.0
1981	34.1	28.2	28.5	b	4.3	4.7	.2	100.0
1982	32.0	28.6	29.2	b	5.1	4.9	.2	100.0
1983	30.6	30.1	28.2	b	5.7	5.2	.2	100.0
1984	30.7	28.6	30.0	b	5.0	5.4	.3	100.0
1985	29.6	29.3	29.8	b	4.5	6.4	.3	100.0
1986	29.0	28.6	30.4	b	4.7	7.0	.3	100.0
1987	29.7	27.3	31.1	b	4.0	7.6	.4	100.0
1988	29.9	26.2	31.4	b	3.5	8.6	.4	100.0
1989[R]	30.2	24.4	32.3	b	4.2	8.6	.3	100.0
1990[P]	29.9	22.9	33.5	b	4.3	9.2	.3	100.0

a. Includes geothermal power and electricity produced from wood and waste.

b. Included in "Bituminous Coal and Lignite."

R–Revised. P–Preliminary.

Source: Same as Table 3-1.

TABLE 2-9

SUMMARY OF ANNUAL ESTIMATES OF RESERVES OF NATURAL GAS IN CANADA, 1971–1990[a]

(Millions of Cubic Feet)

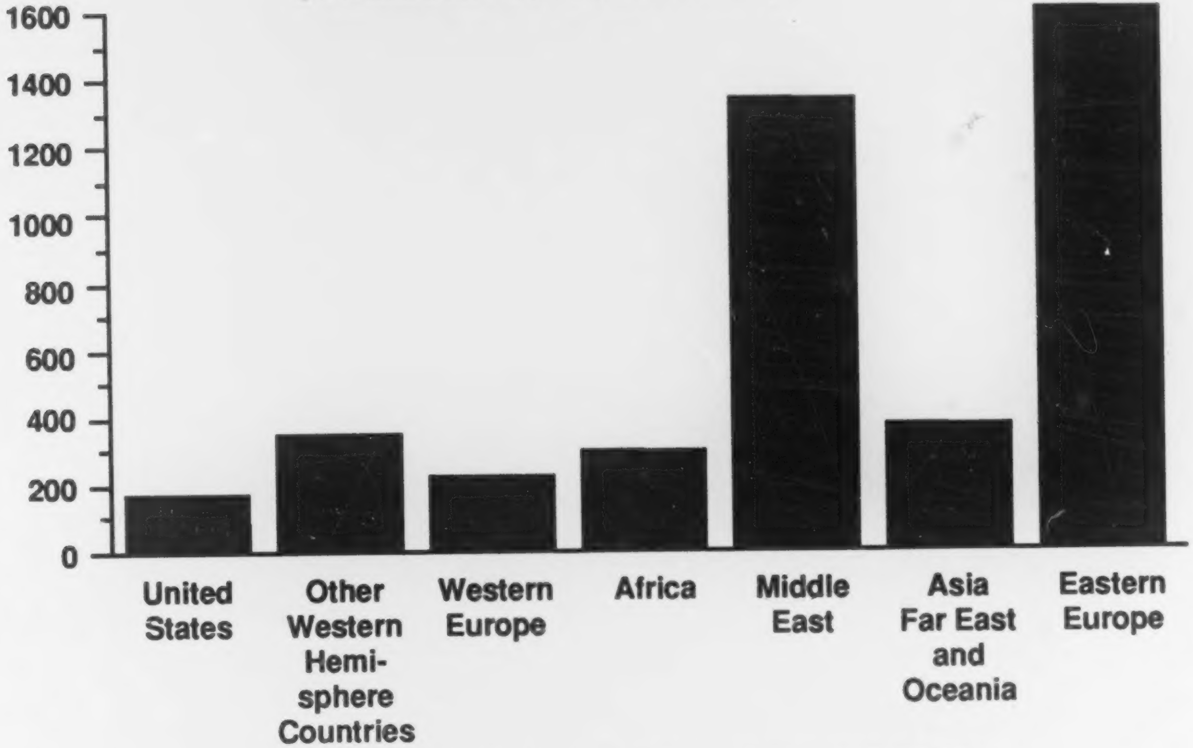
		Changes Due To								
	Reserves Remaining at Beginning of Year	Revisions	Revisions and Extensions	Extensions	Discoveries	Net Change in Underground Storage	Net Production	Reserves Remaining at End of Year	Change During Year	Probable Remaining at End of Year[b]
MARKETABLE GAS[c]										
1971	53,375,628	983,556	—	2,280,205	775,500	65	1,953,104	55,461,850	2,086,222	61,964,760
1972	55,461,850	(2,004,125)	—	1,243,897	487,538	(5,580)	2,247,798	52,935,782	(2,526,068)	60,546,769
1973	52,935,782	(167,054)	—	1,257,243	686,714	70,097	2,325,350	52,457,432	(478,350)	60,801,088
1974	52,457,432	2,953,557	—	3,487,099	193,056	10,428	2,393,486	56,708,086	4,250,654	64,459,133
1975	56,708,086	(177,606)	—	2,412,582	362,895	29,869	2,361,110	56,974,716	266,630	71,466,773
1976	56,974,716	(367,880)	—	3,587,990	639,345	(11,053)	2,541,176	58,281,942	1,307,226	76,359,832
1977	58,281,942	1,432,871	—	1,852,325	351,007	46,730	2,492,849	59,472,026	1,190,084	78,031,771
ESTABLISHED RESERVES										
1977	76,835,973	d	—	d	d	46,709	2,492,850	79,180,390	2,344,416	—
1978	79,180,390	2,026,962	—	2,534,342	1,018,734	3,443	2,340,406	82,423,467	3,243,077	—
1979	82,423,467	3,012,475	—	2,062,527	3,347,747	10,613	2,263,030	88,593,799	6,170,332	—
1980	88,594,374	62,043	—	1,408,320	900,050	(33,222)	2,486,016	88,445,549	(148,825)	—
1981	88,461,174	2,234,086	—	2,062,408	624,303	9,372	2,405,800	90,985,543	2,524,369	—
1982	90,985,541	1,750,541	—	1,425,609	214,029	73,450	2,466,895	91,982,275	996,734	—
1983	91,966,031	1,899,412	—	982,360	223,149	(114,502)	2,225,705	92,730,743	764,712	—
1984	92,730,742	d	—	d	d	d	2,804,502[e]	99,687,016	6,956,274	—
1985	99,145,610	d	—	d	d	d	2,909,576	98,275,160	(870,450)	—
1986	98,811,812	d	—	d	d	d	2,731,846	97,448,391	(1,363,421)	—
1987	97,448,391	d	—	d	d	d	2,834,813	95,576,913	(1,871,478)	—
1988	95,576,913	d	—	d	d	d	3,588,700	94,787,604	(789,310)	—
1989	94,787,604	d	—	d	d	d	3,621,887	96,984,808	2,197,204	—
1990	96,984,808	d	—	d	d	d	3,787,039	96,734,257	(250,550)	—

a. Volumes are calculated at a pressure base of 14.65 psia and at a standard temperature of 60°F.
b. Includes proved reserves.
c. For definition refer to Glossary.
d. Not available.
e. Includes net change in underground storage.
( ): Denotes negative volume.
Source: Canadian Petroleum Association.

CHART 2-4

WORLD ESTIMATED NATURAL GAS RESERVES, 1990

(TRILLIONS OF CUBIC FEET)



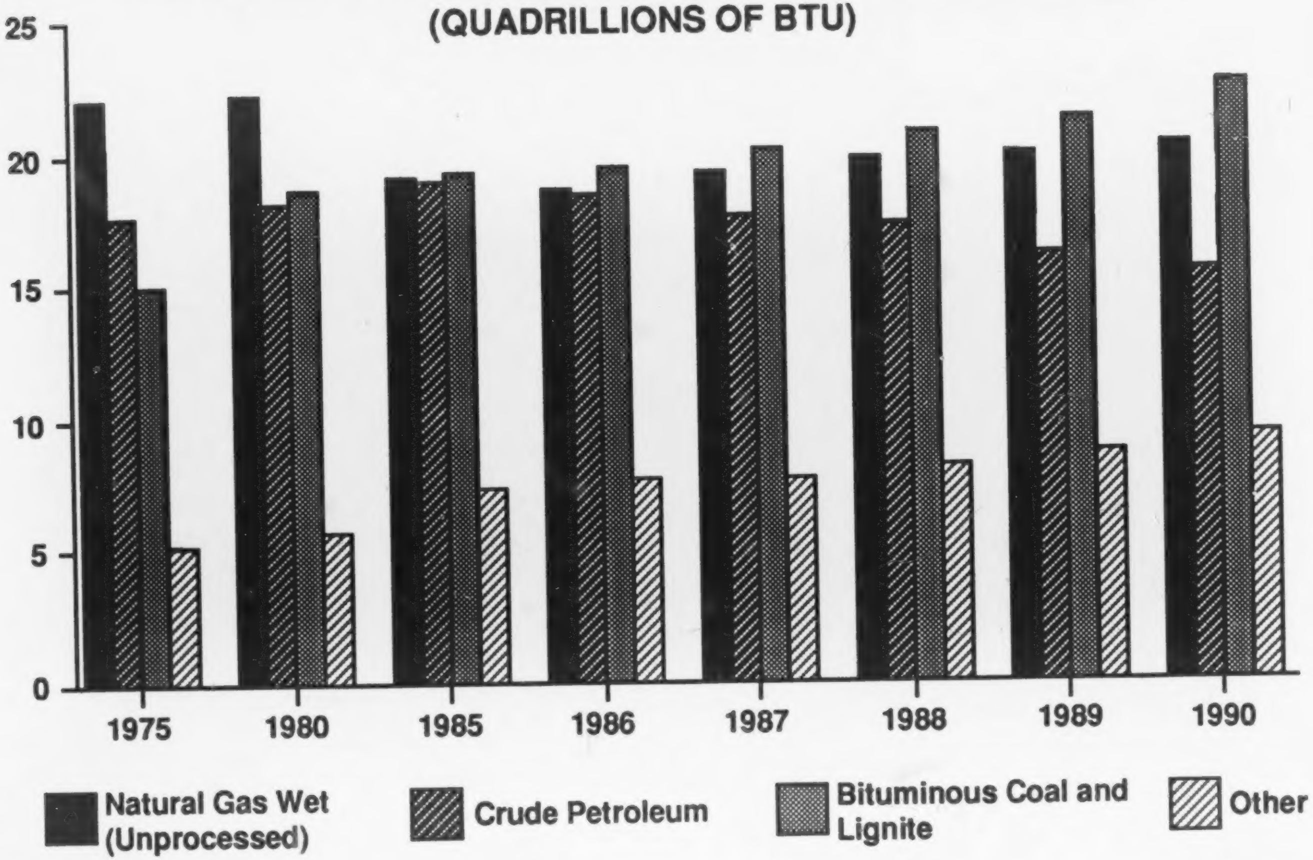
WORLD TOTAL 4,322 TRILLION CUBIC FEET

SOURCE: WORLD OIL, AUGUST 1991

CHART 3-1

UNITED STATES ENERGY PRODUCTION

(QUADRILLIONS OF BTU)



REFERENCE: TABLE 3-1

SUPPLY

TABLE 3-4
GAS UTILITY INDUSTRY, GAS SUPPLY AND DISPOSITION, 1975–1990[a]

(Trillions of Btu)

	Amount						
	1975	1980	1985	1987	1988	1989[R]	1990
Supply—Produced and Purchased—Total	**16,811.5**	**17,276.4**	**14,164.1**	**11,923.6**	**11,923.0**	**11,372.8**	**11,435.0**
Natural Gas	16,490.1	16,935.3	14,016.1	11,853.5	11,845.3	11,297.5	11,373.1
Manufactured Gas	19.3	8.8	3.8	5.3	7.2	5.8	5.5
Liquefied Petroleum Gas	24.8	17.9	6.5	5.2	8.1	6.8	6.0
Substitute Natural Gas	261.3	198.4	76.4	20.1	16.2	14.9	13.5
Liquefied Natural Gas	8.4	79.6	24.7	6.4	8.5	12.6	8.9
Unclassified	7.6	36.4	36.6	33.1	37.7	35.2	28.0
Disposition—Total	**16,811.5**	**17,276.4**	**14,164.1**	**11,923.6**	**11,923.0**	**11,372.8**	**11,435.0**
Used in Production of Other Gases[b]	124.2	95.0	66.6	58.8	76.9	71.0	86.6
Company Use as a Fuel[c]	1,089.3	1,278.7	1,107.3	902.3	908.8	868.5	831.2
Sales to Ultimate Consumers	14,862.9	15,413.2	12,615.2	10,543.4	10,705.3	10,551.1	9,846.4
Other Deliveries (Net)	83.9	85.8	132.6	114.1	144.0	63.2	(101.9)
Placed in Storage (Net)	348.8	16.9	(326.2)	(102.2)	(2.1)	(500.8)	482.8
Unaccounted For[d]	302.4	386.8	568.6	407.2	90.1	319.8	289.9

a. Total supply figures involve some double counting. For production of supplementals see Table 3-16.
b. Includes Natural Gas used for enriching, reforming and mixing.
c. Includes interdepartmental transfers.
d. Represents difference between supply and disposition, and should not be interpreted as a reliable measure of transmission efficiency.
R–Revised.

TABLE 3-5
GAS UTILITY INDUSTRY, MAXIMUM AND MINIMUM DAY SENDOUT[a] BY SOURCE OF SUPPLY, 1983–1990[b]

(Trillions of Btu)

	1983	1984	1985	1986	1987	1988	1989	1990
Maximum Day Sendout—Total	**77.4**	**79.7**	**76.8**	**72.8**	**73.4**	**79.5**	**87.2**	**88.4**
Peak Shaving Facilities	2.5	1.8	2.8	1.4	0.9	1.9	2.2	2.3
Underground Storage Withdrawal	44.1	38.5	44.2	39.7	37.8	39.4	47.9	44.9
Regular Production and Purchases	30.8	39.4	29.8	31.7	34.7	38.2	37.1	41.2
Minimum Day Sendout—Total	**13.1**	**13.6**	**12.0**	**14.3**	**14.5**	**15.9**	**17.4**	**22.7**

a. Represents summation of all companies maximum/minimum day sendout, and is non-coincident.
b. Excludes sendout of pipeline companies to avoid duplication. Underground storage withdrawals include amounts from fields operated by both distributors and pipelines.

TABLE 3-6
GROSS PRODUCTION OF NATURAL GAS, BY STATE, 1975-1989[a]

(Millions of Cubic Feet)

Division and State	1975	1980	1985	1986	1987	1988[R]	1989
United States	**21,103,530**	**21,869,692**	**19,534,475**	**19,062,947**	**20,055,835**	**20,922,266**	**20,998,830**
New England	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Middle Atlantic	**92,400**	**113,089**	**185,568**	**193,573**	**191,796**	**194,556**	**217,243**
New Jersey	0	0	0	0	0	0	0
New York	7,628	15,650	35,334	33,684	28,478	27,467	25,469
Pennsylvania	84,772	97,439	150,234	159,889	163,318	167,089	191,774
East North Central	**191,497**	**305,003**	**321,455**	**317,275**	**321,488**	**320,249**	**324,449**
Illinois	1,440	1,574	1,324	1,887	1,371	1,338	1,477
Indiana	346	463	367	365	217	412	416
Michigan	103,901	164,110	137,519	132,951	153,307	151,809	162,826
Ohio	85,810	138,856	182,245	182,072	166,593	166,690	159,730
Wisconsin	0	0	0	0	0	0	0
West North Central	**877,137**	**791,315**	**604,140**	**541,722**	**535,090**	**649,330**	**652,669**
Iowa	0	0	0	0	0	0	0
Kansas	846,164	737,246	514,415	466,897	458,426	577,815	588,757
Minnesota	0	0	0	0	0	0	0
Missouri	30	0	4	4	4	4	4
Nebraska	3,963	2,550	1,944	1,403	1,261	910	878
North Dakota	26,941	50,321	84,631	70,955	71,737	66,318	58,326
South Dakota	39	1,198	3,146	2,463	3,662	4,283	4,704
South Atlantic	**205,683**	**210,852**	**171,567**	**160,644**	**188,696**	**202,060**	**224,942**
Delaware	0	0	0	0	0	0	0
District of Columbia	0	0	0	0	0	0	0
Florida	44,383	46,421	11,604	9,766	9,132	8,407	8,773
Georgia	0	0	0	0	0	0	0
Maryland	93	68	39	20	44	29	34
North Carolina	0	0	0	0	0	0	0
South Carolina	0	0	0	0	0	0	0
Virginia	6,723	7,812	15,041	15,427	19,520	18,682	17,935
West Virginia	154,484	156,551	144,883	135,431	160,000	174,942	198,200
East South Central	**192,544**	**385,362**	**413,130**	**439,370**	**452,958**	**487,963**	**454,473**
Alabama	38,921	111,836	143,420	145,625	155,143	175,054	180,300
Kentucky	60,511	57,180	73,126	80,195	70,125	73,629	72,417
Mississippi	92,500	215,105	191,898	210,086	224,983	237,180	199,856
Tennessee	612	1,241	4,686	3,464	2,707	2,100	1,900
West South Central	**17,073,397**	**16,810,823**	**13,913,317**	**13,691,753**	**14,064,468**	**14,464,137**	**14,377,516**
Arkansas	121,518	127,696	181,959	153,165	166,998	190,678	168,300
Louisiana	7,242,408	7,008,489	5,218,098	4,964,758	5,204,984	5,248,205	5,142,971
Oklahoma	1,720,698	2,018,577	1,936,341	1,917,493	2,004,797	2,106,632	2,185,204
Texas	7,988,773	7,656,061	6,576,919	6,656,337	6,687,689	6,918,622	6,881,041
Mountain	**1,849,992**	**1,952,333**	**1,981,297**	**1,780,632**	**2,075,183**	**2,165,880**	**2,313,532**
Arizona	255	357	209	185	185	179	1,455
Colorado	174,145	191,806	189,565	175,618	186,286	212,030	237,372
Idaho	0	0	0	0	0	0	0
Montana	44,547	53,802	54,151	48,246	47,845	53,014	52,583
Nevada	0	0	0	0	0	0	0
New Mexico	1,227,200	1,168,049	926,174	721,217	845,478	811,994	878,080
Utah	77,607	87,766	213,302	238,388	261,911	277,910	278,081
Wyoming	326,238	450,553	597,896	596,978	733,478	810,753	865,961
Pacific	**620,880**	**1,300,915**	**1,944,001**	**1,937,978**	**2,226,156**	**2,438,091**	**2,434,006**
Alaska	253,227	893,759	1,343,553	1,375,054	1,694,870	1,933,047	1,965,013
California	367,653	407,151	596,368	558,324	527,486	501,044	466,493
Hawaii	0	0	0	0	0	0	0
Oregon	0	5	4,080	4,600	3,800	4,000	2,500
Washington	0	0	0	0	0	0	0
Other States	**0**	**0**	**0**	**0**	**0**	**0**	**0**

a. Includes gas (mostly residue gas) blown to the air, but does not include direct waste on producing properties, except where data are available.

R–Revised.

Source: U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, 1989.

TABLE 3-7
NET WELLHEAD PRODUCTION OF NATURAL GAS, BY STATE, 1975-1989[a]

(Millions of Cubic Feet)

Division and State	1975	1980	1985	1986	1987	1988R	1989
United States	**20,242,574**	**20,504,238**	**17,619,278**	**17,225,395**	**17,848,276**	**18,443,884**	**18,547,823**
New England	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Middle Atlantic	**92,400**	**113,089**	**185,568**	**193,573**	**191,796**	**194,556**	**217,243**
New Jersey	0	0	0	0	0	0	0
New York	7,628	15,650	35,334	33,684	28,478	27,467	25,469
Pennsylvania	84,772	97,439	150,234	159,889	163,318	167,089	191,774
East North Central	**190,471**	**302,628**	**319,115**	**314,935**	**318,882**	**317,909**	**321,681**
Illinois	1,440	1,574	1,324	1,887	1,371	1,338	1,477
Indiana	346	463	367	365	217	412	416
Michigan	103,725	161,735	135,179	130,611	150,701	149,469	160,058
Ohio	84,960	138,856	182,245	182,072	166,593	166,690	159,730
Wisconsin	0	0	0	0	0	0	0
West North Central	**875,409**	**789,841**	**600,360**	**540,877**	**533,942**	**648,004**	**651,652**
Iowa	0	0	0	0	0	0	0
Kansas	844,471	735,772	513,387	466,144	457,509	576,852	587,740
Minnesota	0	0	0	0	0	0	0
Missouri	30	0	4	4	4	4	4
Nebraska	3,963	2,550	1,944	1,403	1,261	910	878
North Dakota	26,941	50,321	82,273	70,955	71,737	66,318	58,326
South Dakota	5	1,198	2,752	2,371	3,431	3,920	4,704
South Atlantic	**205,683**	**210,852**	**171,567**	**160,644**	**188,596**	**202,060**	**224,942**
Delaware	0	0	0	0	0	0	0
District of Columbia	0	0	0	0	0	0	0
Florida	44,383	46,421	11,604	9,766	9,132	8,407	8,773
Georgia	0	0	0	0	0	0	0
Maryland	93	68	39	20	44	29	34
North Carolina	0	0	0	0	0	0	0
South Carolina	0	0	0	0	0	0	0
Virginia	6,723	7,812	15,041	15,427	19,520	18,682	17,935
West Virginia	154,484	156,551	144,883	135,431	160,000	174,942	198,200
East South Central	**186,251**	**369,219**	**390,809**	**402,219**	**413,017**	**425,571**	**395,827**
Alabama	38,921	108,702	128,651	127,387	137,293	151,610	152,044
Kentucky	60,511	57,180	73,126	80,195	70,125	73,629	72,417
Mississippi	86,207	202,096	184,346	191,173	202,892	198,232	169,466
Tennessee	612	1,241	4,686	3,464	2,707	2,100	1,900
West South Central	**16,387,930**	**16,273,072**	**13,336,432**	**13,262,065**	**13,576,213**	**13,939,413**	**13,883,835**
Arkansas	117,555	112,202	155,923	132,836	142,219	167,684	168,300
Louisiana	7,116,104	6,962,775	5,038,715	4,919,567	5,147,799	5,203,102	5,100,023
Oklahoma	1,637,212	1,917,379	1,936,341	1,917,493	2,004,797	2,106,632	2,185,204
Texas	7,517,059	7,280,716	6,205,453	6,292,169	6,281,398	6,461,995	6,430,308
Mountain	**1,813,914**	**1,898,955**	**1,790,095**	**1,567,806**	**1,819,132**	**1,921,487**	**2,079,934**
Arizona	255	357	209	185	185	179	1,455
Colorado	174,145	191,610	188,817	175,133	185,693	209,789	230,669
Idaho	0	0	0	0	0	0	0
Montana	43,936	53,572	53,954	48,060	47,637	52,800	52,406
Nevada	0	0	0	0	0	0	0
New Mexico	1,219,072	1,154,992	911,181	706,732	830,013	796,810	860,976
Utah	57,160	87,766	86,145	93,695	88,730	103,138	121,250
Wyoming	319,346	410,658	549,789	544,001	666,874	758,771	813,178
Pacific	**490,516**	**546,582**	**825,332**	**783,276**	**806,598**	**794,884**	**772,709**
Alaska	170,671	235,408	327,642	313,703	375,440	387,656	403,515
California	319,845	311,169	493,610	464,973	427,358	403,228	366,694
Hawaii	0	0	0	0	0	0	0
Oregon	0	5	4,080	4,600	3,800	4,000	2,500
Washington	0	0	0	0	0	0	0
Other States	**0**	**0**	**0**	**0**	**0**	**0**	**0**

a. As defined by A.G.A. "Net Wellhead Production" equals "Gross Production" less gas for repressuring (see Table 3-3) and therefore includes natural gas liquids.

R–Revised.

Source: U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, 1989.

TABLE 3-8
MARKETED PRODUCTION OF NATURAL GAS, BY STATE, 1975-1989[a]

(Millions of Cubic Feet)

Division and State	1975	1980	1985	1986	1987	1988[R]	1989
United States	**20,108,661**	**20,378,787**	**17,524,496**	**17,127,761**	**17,724,570**	**18,301,357**	**18,406,956**
New England	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Middle Atlantic	**92,304**	**113,082**	**181,795**	**189,853**	**188,994**	**190,544**	**212,207**
New Jersey	0	0	0	0	0	0	0
New York	7,628	15,643	31,561	29,964	25,676	23,455	20,433
Pennsylvania	84,676	97,439	150,234	159,889	163,318	167,089	191,774
East North Central	**188,859**	**299,195**	**315,791**	**311,611**	**315,177**	**314,585**	**317,611**
Illinois	1,440	1,574	1,324	1,887	1,371	1,338	1,477
Indiana	346	463	367	365	217	412	416
Michigan	102,113	158,302	131,855	127,287	146,996	146,145	155,988
Ohio	84,960	138,856	182,245	182,072	166,593	166,690	159,730
Wisconsin	0	0	0	0	0	0	0
West North Central	**871,006**	**781,124**	**596,667**	**533,435**	**530,712**	**644,655**	**648,757**
Iowa	0	0	0	0	0	0	0
Kansas	843,625	735,035	512,872	465,695	457,050	576,274	587,230
Minnesota	0	0	0	0	0	0	0
Missouri	30	0	4	4	4	4	4
Nebraska	2,565	2,550	1,944	1,403	1,261	910	878
North Dakota	24,786	42,346	79,289	64,102	68,966	63,547	56,276
South Dakota	0	1,193	2,558	2,231	3,431	3,920	4,369
South Atlantic	**205,683**	**210,175**	**171,553**	**160,590**	**188,370**	**201,636**	**224,493**
Delaware	0	0	0	0	0	0	0
District of Columbia	0	0	0	0	0	0	0
Florida	44,383	45,744	11,590	9,712	9,103	8,241	8,324
Georgia	0	0	0	0	0	0	0
Maryland	93	68	39	20	44	29	34
North Carolina	0	0	0	0	0	0	0
South Carolina	0	0	0	0	0	0	0
Virginia	6,723	7,812	15,041	15,427	19,223	18,424	17,935
West Virginia	154,484	156,551	144,883	135,431	160,000	174,942	198,200
East South Central	**172,697**	**349,417**	**385,284**	**396,063**	**407,550**	**418,235**	**390,123**
Alabama	37,814	105,527	127,224	126,077	135,938	149,786	150,542
Kentucky	60,511	57,180	73,126	80,195	70,125	73,629	72,417
Mississippi	74,345	185,469	180,248	186,327	198,780	192,720	165,264
Tennessee	27	1,241	5,022	3,464	2,707	2,100	1,900
West South Central	**16,298,056**	**16,195,435**	**13,279,819**	**13,210,081**	**13,520,529**	**13,883,635**	**13,832,167**
Arkansas	116,237	111,808	155,099	131,075	141,151	166,573	168,300
Louisiana	7,090,645	6,939,924	5,013,702	4,895,394	5,122,509	5,180,267	5,078,125
Oklahoma	1,605,410	1,891,824	1,936,341	1,917.493	2,004,797	2,106,632	2,185,204
Texas	7,485,764	7,251,879	6,174,677	6,266,119	6,252,072	6,430,163	6,400,538
Mountain	**1,801,478**	**1,889,983**	**1,776,751**	**1,554,464**	**1,784,977**	**1,864,934**	**2,021,406**
Arizona	208	214	85	63	60	56	1,360
Colorado	171,629	190,814	186,996	173,556	183,333	205,196	226,708
Idaho	0	0	0	0	0	0	0
Montana	40,734	51,867	52,494	46,592	46,456	51,654	51,307
Nevada	0	0	0	0	0	0	0
New Mexico	1,217,430	1,149,781	905,312	702,652	826,203	793,227	856,557
Utah	55,354	87,766	83,405	90,013	87,158	101,372	120,089
Wyoming	316,123	409,541	548.459	541,588	641,767	713,429	765,385
Pacific	**478,578**	**540,376**	**816,836**	**771,664**	**788,261**	**783,133**	**760,192**
Alaska	160,270	230,588	321,346	304,841	359,837	378,638	393,729
California	318,308	309,783	491,410	462,223	424,624	400,495	363,963
Hawaii	0	0	0	0	0	0	0
Oregon	0	5	4,080	4,600	3,800	4,000	2,500
Washington	0	0	0	0	0	0	0

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a. Includes 199,063 million cubic feet of nonhydrocarbon gases in 1980, 221,937 million cubic feet in 1983, 224,118 million cubic feet in 1984, 326,497 million cubic feet in 1985, 336,851 million cubic feet in 1986, 376,033 million cubic feet in 1987, 459,883 million cubic feet in 1988 and 362,457 in 1989.

R–Revised.

Source: U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, 1989.

TABLE 3-9
NATURAL GAS PRODUCTION PURCHASED BY ALL INTERSTATE NATURAL GAS PIPELINE COMPANIES, BY STATE, 1983-1989

(Millions of Cubic Feet)

Division and State	1983	1984	1985	1986	1987	1988	1989
Total United States	**9,496,902**	**10,421,625**	**8,917,751**	**7,578,336**	**6,655,016**	**5,804,155**	**4,843,332**
New England[a]	**0**	**0**	**0**	**0**	**0**	**15,547**	**18,255**
Middle Atlantic	**74,779**	**82,081**	**109,281**	**89,192**	**88,892**	**75,056**	**77,330**
New Jersey	0	0	0	0	0	0	0
New York	8,167	9,187	40,121	31,295	36,757	26,645	34,746
Pennsylvania	72,653	65,592	69,160	57,897	52,135	48,411	42,584
East North Central	**50,278**	**57,895**	**75,082**	**34,140**	**36,169**	**38,999**	**29,047**
Illinois	476	234	1,219	5,741	14,498	15,399	1,117
Indiana	38	8	0	0	0	2	1
Michigan	0	0	0	0	1,716	6,850	15,996
Ohio	49,764	57,653	73,863	28,399	19,955	16,748	11,933
Wisconsin	0	0	0	0	0	0	0
West North Central	**336,984**	**405,312**	**431,203**	**381,849**	**277,602**	**211,380**	**210,692**
Iowa	0	0	0	0	0	35,902	0
Kansas	299,843	379,346	407,636	359,193	223,904	167,339	187,778
Minnesota	0	3,335	0	0	0	0	0
Missouri	0	0	0	0	0	0	9,583
Nebraska	3,004	3,547	991	770	561	401	320
North Dakota	32,834	18,267	21,647	21,210	16,734	16,175	12,462
South Dakota	1,303	817	929	676	501	545	549
South Atlantic	**139,596**	**161,704**	**209,172**	**195,876**	**209,878**	**208,883**	**219,974**
Delaware	0	0	0	0	0	0	0
District of Columbia	0	0	0	0	0	0	0
Florida	6,385	2,915	2,769	1,888	2,189	2,038	1,477
Georgia	0	0	0	0	0	0	0
Maryland	31	60	35,616	22	45	71,495	83,776
North Carolina	0	0	0	0	0	0	0
South Carolina	0	0	0	0	0	0	0
Virginia	4,323	8,976	14,251	61,366	85,059	15,992	16,165
West Virginia	128,857	149,753	156,536	132,600	122,585	119,358	118,556
East South Central	**201,611**	**227,437**	**194,620**	**183,042**	**213,233**	**215,798**	**188,060**
Alabama	30,079	33,653	36,101	25,880	27,527	30,711	34,420
Kentucky	32,661	47,238	45,458	43,869	46,404	47,678	40,689
Mississippi	135,058	142,509	108,984	110,227	136,307	134,754	110,737
Tennessee	3,813	4,037	4,077	3,066	2,995	2,655	2,214
West South Central	**7,413,344**	**8,188,459**	**6,629,637**	**5,769,879**	**4,899,859**	**4,370,327**	**3,582,467**
Arkansas	79,162	83,534	114,516	138,903	166,885	169,578	166,752
Louisiana	4,031,576	4,562,678	3,593,587	3,053,072	2,505,273	2,226,857	1,697,644
Oklahoma	888,113	986,368	824,866	691,530	579,382	511,997	460,564
Texas	2,414,493	2,555,879	2,096,668	1,886,374	1,648,319	1,461,895	1,257,507
Mountain	**1,272,693**	**1,302,648**	**1,268,756**	**924,358**	**893,105**	**639,462**	**492,914**
Arizona	0	0	0	0	73	9	13
Colorado	122,040	116,262	95,180	80,946	69,974	68,045	42,671
Idaho	0	0	0	0	0	0	0
Montana	31,658	24,351	18,021	20,151	15,031	20,980	22,078
Nevada	0	0	0	0	0	0	0
New Mexico	713,159	736,216	739,709	483,939	528,437	314,040	221,865
Utah	53,165	52,753	52,925	37,234	29,839	27,088	21,710
Wyoming	352,671	373,066	362,921	302,088	249,751	209,300	184,577
Pacific[b]	**0**	**0**	**0**	**0**	**20,731**	**27,689**	**24,509**
Undesignated	**0**	**0**	**0**	**0**	**0**	**38**	**84**

a. Massachusetts
b. California

Source: U.S. Department of Energy, Energy Information Adminisration, *Gas Supplies of Interstate Natural Gas Pipeline Companies,* 1989.

SUPPLY

TABLE 3-11
INTERSTATE MOVEMENTS AND MOVEMENTS ACROSS U.S. BORDERS OF NATURAL AND SUPPLEMENTAL GAS, 1989[a]

(Millions of Cubic Feet)

Division and State	Interstate Movements			Movements Across U.S. Borders		
	Receipts	Deliveries	Net	Receipts[b]	Deliveries[c]	Net
United States	**45,727,012**	**45,727,012**	**0**	**1,728,333**	**453,682**	**1,274,651**
New England	**650,948**	**283,033**	**367,916**	**51,381**	**0**	**51,381**
Connecticut	234,593	137,224	97,369	0	0	0
Maine	3,686	0	3,686	0	0	0
Massachusetts	248,715	23,294	225,422	38,229	0	38,229
New Hampshire	17,736	3,657	1,374,468	0	0	0
Rhode Island	146,218	111,986	34,232	0	0	0
Vermont	0	6,872	(6,872)	13,152	0	13,152
Middle Atlantic	**3,731,107**	**2,356,639**	**1,374,468**	**67,956**	**0**	**67,956**
New Jersey	865,693	556,135	309,558	0	0	0
New York	1,007,706	375,695	632,011	67,956	0	67,956
Pennsylvania	1,857,708	1,424,809	432,899	0	0	0
East North Central	**5,986,656**	**3,123,763**	**2,862,892**	**7**	**363,680**	**(363,673)**
Illinois	1,546,771	642,097	904,674	0	0	0
Indiana	1,200,921	914,255	286,666	0	0	0
Michigan	819,015	1,495	817,519	7	363,680	(363,673)
Ohio	1,644,024	1,100,519	817,519	0	0	0
Wisconsin	775,925	465,397	310,528	0	0	0
West North Central	**5,375,018**	**5,257,756**	**117,262**	**609,208**	**7,119**	**602,089**
Iowa	1,168,434	946,728	221,706	0	0	0
Kansas	929,754	1,046,725	(116,971)	0	0	0
Minnesota	581,545	895,058	(313,513)	609,208	7,119	602,089
Missouri	937,247	693,935	243,311	0	0	0
Nebraska	1,011,038	888,303	122,736	0	0	0
North Dakota	338,072	402,546	(64,474)	0	0	0
South Dakota	408,928	384,461	24,467	0	0	0
South Atlantic	**6,638,657**	**5,347,620**	**1,291,037**	**0**	**0**	**0**
Delaware	39,248	3,005	36,242	0	0	0
District of Columbia	34,598	0	34,598	0	0	0
Florida	322,798	32	322,766	0	0	0
Georgia	1,320,609	1,007,074	313,535	0	0	0
Maryland	905,295	693,852	211,443	0	0	0
North Carolina	878,416	711,800	166,617	0	0	0
South Carolina	993,292	876,596	116,696	0	0	0
Virginia	1,029,161	880,831	148,330	0	0	0
West Virginia	1,115,240	1,174,430	(59,190)	0	0	0
East South Central	**13,059,957**	**12,283,937**	**776,020**	**0**	**0**	**0**
Alabama	2,396,278	2,251,139	145,139	0	0	0
Kentucky	2,777,099	2,513,850	263,249	0	0	0
Mississippi	4,922,637	4,737,578	185,059	0	0	0
Tenneessee	2,963,943	2,781,370	182,573	0	0	0
West South Central	**4,480,268**	**11,398,003**	**(6,917,735)**	**3,934**	**15,535**	**(11,601)**
Arkansas	2,239,086	2,164,716	74,371	0	0	0
Louisiana	1,421,040	5,104,845	(3,683,806)	3,934	0	3,934
Oklahoma	288,521	1,448,808	(1,160,287)	0	0	0
Texas	531,621	2,679,634	(2,148,013)	0	15,535	(15,535)
Mountain	**3,168,854**	**4,775,900**	**(1,607,044)**	**825,015**	**15,923**	**809,092**
Arizona	1,443,075	1,275,692	167,384	0	1,469	(1,469)
Colorado	473,834	433,066	40,768	0	0	0
Idaho	78,911	534,497	(455,586)	501,477	0	501,477
Montana	22,259	358,128	(335,869)	323,538	14,454	309,084
Nevada	65,715	2,556	63,158	0	0	0
New Mexico	846,451	1,523,896	(677,445)	0	0	0
Utah	126,786	84,990	41,796	0	0	0
Wyoming	111,823	563,073	(451,250)	0	0	0
Pacific	**2,635,547**	**900,362**	**1,735,185**	**170,832**	**51,424**	**119,408**
Alaska	0	0	0	0	51,424	(51,424)
California	1,627,420	0	1,627,420	0	0	0
Hawaii	0	0	0	0	0	0
Oregon	510,333	390,029	120,304	0	0	0
Washington	497,794	510,333	(12,539)	170,832	0	170,832

a. Supplemental Gas Supplies totaled 101,133 million cubic feet. See Table 3-16.
b. For detail by country see Table 3-13.
c. For detail by country see Table 3-12.
Source: U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, 1989.

TABLE 3-12
EXPORTS OF NATURAL GAS FROM THE UNITED STATES, 1970–1990

(Millions of Cubic Feet)

Year	Total	Canada	Mexico	Japan[a]
1970	69,831	10,878	14,678	44,257
1971	80,212	14,349	15,632	50,231
1972	78,014	15,553	14,579	47,882
1973	77,169	14,824	13,999	48,346
1974	76,789	13,263	13,268	50,258
1975	72,675	10,219	9,454	53,002
1976	64,710	7,506	7,425	49,779
1977	55,626	31	3,940	51,655
1978	52,533	66	4,033	48,434
1979	55,673	76	4,308	51,289
1980	48,731	113	3,886	44,732
1981	59,372	106	3,337	55,929
1982	51,728	162	1,705	49,861
1983	54,639	136	1,646	52,857
1984	54,753	127	1,786	52,840
1985	55,268	178	2,207	52,883
1986	61,271	9,203	1,896	50,172
1987	54,020	3,297	2,125	48,599
1988	73,638	19,738	2,327	51,573
1989	106,871	38,443	17,004	51,424
1990	85,565	17,359	15,659	52,546

a. LNG exports from Alaska.
Source: U.S. Department of Energy, Energy Information Administration, *Natural Gas Monthly.*

TABLE 3-13
IMPORTS OF NATURAL GAS TO THE UNITED STATES, 1970–1990

(Millions of Cubic Feet)

Year	Total	Canada	Mexico	Algeria[a]
1970	820,780	778,687	41,336	757
1971	934,548	912,426	20,689	1,433
1972	1,019,496	1,009,323	8,140	2,032
1973	1,032,901	1,027,883	1,632	3,388
1974	959,284	959,063	222	0
1975	953,008	948,115	0	4,893
1976	963,768	953,613	0	10,155
1977	1,011,002	997,295	2,384	11,324
1978	965,545	881,123	0	84,422
1979	1,253,383	1,000,775	0	252,608
1980	984,767	796,507	102,410	85,850
1981	903,949	762,113	105,013	36,824
1982	933,336	783,407	94,794	55,136
1983	918,407	711,923	75,361	131,124
1984	843,060	755,368	51,502	36,191
1985	949,715	926,056	0	23,659
1986	750,449	748,780	0	1,669
1987	992,532	992,532	0	0
1988	1,293,812	1,276,322	0	17,490
1989	1,381,520	1,339,357	0	42,163
1990	1,532,259	1,448,065	0	84,193

a. Quantities represent total LNG imports from overseas into the U.S.
Source: U.S. Department of Energy, Energy Information Administration, *Natural Gas Monthly.*

TABLE 3-14
NATURAL GAS DELIVERED TO CONSUMERS BY STATE, 1975-1989[a]

(Millions of Cubic Feet)

Division and State	1975	1980	1985	1986	1987	1988[R]	1989[b]
United States	**17,558,353**	**18,216,233**	**15,811,130**	**14,813,731**	**15,468,385**	**16,319,793**	**17,079,656**
New England	**254,070**	**297,506**	**343,158**	**307,009**	**372,194**	**348,987**	**399,252**
Connecticut	63,968	72,512	77,864	78,264	90,867	87,592	94,484
Maine	13,534[c]	2,166	2,520	2,465	2,629	3,191	3,672
Massachusetts	153,461	181,912	217,503	184,727	225,701	208,998	247,205
New Hampshire	d	9,448	10,545	10,269	11,951	12,987	13,925
Rhode Island	23,107	27,477	29,733	26,270	35,865	30,668	33,821
Vermont	d	3,991	4,993	5,014	5,181	5,551	6,145
Middle Atlantic	**1,451,698**	**1,818,067**	**1,723,100**	**1,647,322**	**1,751,952**	**1,822,776**	**1,942,237**
New Jersey	243,714	339,358	376,982	350,632	418,018	411,415	452,476
New York	573,699	733,800	758,031	724,481	749,004	784,673	839,957
Pennsylvania	634,285	744,909	588,087	572,209	584,930	626,688	649,804
East North Central	**3,718,831**	**3,628,619**	**3,090,195**	**2,928,230**	**2,880,161**	**3,225,937**	**3,308,016**
Illinois	1,080,787	1,074,771	946,614	911,974	863,261	952,529	978,413
Indiana	467,736	480,346	428,124	389,312	406,661	447,542	453,526
Michigan	865,539	846,278	690,493	648,981	635,568	722,598	749,612
Ohio	944,925	883,613	719,393	702,851	697,895	790,436	799,852
Wisconsin	359,844	343,611	305,571	275,112	276,776	312,832	326,613
West North Central	**1,686,051**	**1,455,928**	**1,165,391**	**1,061,556**	**1,036,196**	**1,177,768**	**1,178,757**
Iowa	329,703	256,900	215,553	199,640	192,728	228,538	215,294
Kansas	402,273	411,494	274,900	241,346	250,528	264,539	253,952
Minnesota	327,315	276,717	251,243	237,361	225,292	272,585	287,891
Missouri	362,130	312,872	255,636	238,144	229,960	248,022	256,105
Nebraska	207,371	152,283	120,496	100,762	98,179	117,234	115,293
North Dakota	24,757	21,660	22,682	21,189	18,672	22,876	24,959
South Dakota	32,502	24,002	24,881	23,114	20,837	23,974	25,263
South Atlantic	**1,268,171**	**1,390,415**	**1,221,828**	**1,217,169**	**1,295,220**	**1,342,917**	**1,424,312**
Delaware	18,603	29,797	38,488	33,005	36,699	29,253	34,919
District of Columbia	e	27,868	28,526	29,229	30,728	32,483	33,174
Florida	271,471	304,638	278,666	278,439	288,317	282,792	310,493
Georgia	322,383	307,827	276,446	273,799	297,249	316,105	309,970
Maryland	163,462[f]	156,300	148,589	150,477	166,428	170,326	187,512
North Carolina	111,276	147,448	129,081	130,787	143,500	146,790	156,105
South Carolina	120,308	139,214	95,225	96,175	103,273	109,817	114,237
Virginia	118,083	149,980	134,589	135,725	135,079	154,756	167,450
West Virginia	142,585	127,343	92,218	89,533	93,947	100,595	110,452
East South Central	**809,664**	**856,158**	**727,003**	**682,301**	**689,645**	**746,181**	**782,871**
Alabama	245,287	242,793	202,901	187,654	189,112	217,586	225,124
Kentucky	182,781	180,368	149,102	140,704	147,258	160,332	165,562
Mississippi	183,807	219,828	195,058	179,610	168,075	171,168	188,597
Tennessee	197,789	213,169	179,942	174,333	185,200	197,095	203,588
West South Central	**5,332,025**	**5,873,159**	**4,720,819**	**4,583,676**	**4,635,510**	**4,878,573**	**5,131,999**
Arkansas	241,803	260,319	174,991	184,148	151,856	197,208	228,392
Louisiana	1,425,686	1,523,691	1,086,006	1,149,230	1,147,961	1,116,676	1,209,158
Oklahoma	565,387	639,642	473,906	448,808	467,942	460,130	468,488
Texas	3,099,149	3,449,507	2,985,916	2,801,490	2,867,751	3,104,559	3,225,961
Mountain	**982,840**	**842,444**	**657,276**	**576,447**	**585,189**	**657,725**	**725,194**
Arizona	139,130	144,511	112,228	88,587	92,305	106,017	127,177
Colorado	294,760	241,765	200,976	181,770	189,263	208,087	218,766
Idaho	56,182	44,835	36,243	32,110	33,583	36,646	40,679
Montana	75,441	54,460	42,879	37,272	34,687	37,587	41,575
Nevada	61,251	58,284	39,087	33,746	41,161	48,031	62,950
New Mexico	172,638	146,579	78,453	72,830	79,406	94,650	101,126
Utah	116,620	106,647	104,915	90,784	80,494	90,702	96,288
Wyoming	66,818	45,363	42,495	39,348	34,290	36,005	36,633
Pacific	**2,055,003**	**2,053,937**	**2,162,360**	**1,810,021**	**2,222,314**	**2,118,932**	**2,187,018**
Alaska	66,815	122,966	143,470	127,812	130,478	132,017	127,414
California	1,727,729	1,729,650	1,806,398	1,496,008	1,889,118	1,762,480	1,799,042
Hawaii	0	3,131	2,483	2,463	2,610	2,614	2,694
Oregon	101,980	73,083	78,297	67,349	72,143	78,996	99,448
Washington	158,479	125,107	131,712	116,389	127,965	142,825	158,420

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a. Includes deliveries made directly to end users in addition to gas utility sales as shown in Table 6-7.
b. Includes 106,748 million cubic feet (MMcf) of Supplemental Gas Supplies, less 362,457. MMcf of Nonhydrocarbon Gases.
c. Includes New Hampshire and Vermont.
d. Included in Maine.
e. Included in Maryland.
f. Includes District of Columbia.
R–Revised.

Source: U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, 1989.

TABLE 3-3
SUPPLY AND DISPOSITION OF GAS IN THE UNITED STATES, 1967–1989

(Millions of Cubic Feet)

	Gross Production[a]						Disposition of Marketed Production									
Year	Gas Wells	Oil Wells	Total	Repressuring	Vented and Flared	Marketed Production[b]	Extraction Loss	Lease and Plant Fuel	Net Change in Storage	Pipeline Fuel	Unaccounted For	Nonhydrocarbon Gases	Domestic Dry Production For Sale	Net Imports	Supplemental Supplies	Delivered to Consumers[c]
1967	15,346,853	4,904,923	20,251,776	1,590,574	489,877	18,171,325	784,534	1,140,966	184,829	575,752	296,214	d	15,189,030	482,612	d	15,671,642
1968	16,539,925	4,785,075	21,325,000	1,486,092	516,508	19,322,400	827,877	1,237,131	95,539	590,965	325,062	d	16,245,826	558,140	d	16,803,966
1969	17,489,415	5,189,780	22,679,195	1,455,205	525,750	20,698,240	866,560	1,345,648	119,500	630,962	331,587	d	17,403,983	675,647	d	18,079,630
1970	18,594,658	5,191,795	23,786,453	1,376,351	489,460	21,920,642	906,413	1,398,758	398,160	722,166	227,650	d	18,267,495	750,967	d	19,018,462
1971	18,925,136	5,162,895	24,088,031	1,310,458	284,561	22,493,012	883,127	1,413,650	331,768	742,592	338,999	d	18,782,876	854,336	d	19,637,212
1972	19,042,592	4,973,517	24,016,109	1,236,292	248,119	22,531,698	907,993	1,455,563	135,734	766,156	328,002	d	18,938,250	941,483	d	19,879,733
1973	19,371,600	4,695,602	24,067,202	1,171,361	248,292	22,647,549	916,551	1,495,915	441,504	728,177	195,863	d	18,869,539	955,732	d	19,825,271
1974	18,669,212	4,180,581	22,849,793	1,079,890	169,381	21,600,522	887,490	1,477,386	83,663	668,792	288,731	d	18,194,460	882,495	d	19,076,955
1975	17,380,293	3,723,237	21,103,530	860,956	133,913	20,108,661	872,282	1,396,277	344,054	582,963	235,068	d	16,678,020	880,333	d	17,558,353
1976	17,190,655	3,753,123	20,943,778	859,410	131,930	19,952,438	854,086	1,634,355	(165,327)	548,323	216,240	d	16,864,760	899,058	d	17,763,818
1977	17,415,983	3,681,088	21,097,071	934,801	136,807	20,025,463	862,563	1,659,145	556,631	532,669	41,063	d	16,373,392	955,375	d	17,328,767
1978	17,394,213	3,914,602	21,308,815	1,181,432	153,350	19,974,033	852,130	1,647,911	120,237	530,451	287,201	d	16,536,103	913,013	d	17,449,116
1979	18,033,879	3,849,474	21,883,353	1,245,074	167,019	20,471,260	807,845	1,498,530	248,034	600,964	372,330	d	16,943,557	1,197,710	d	18,141,267
1980	17,572,526	4,297,166	21,869,692	1,365,454	125,451	20,378,787	776,605	1,026,438	(23,269)	634,622	639,559	199,063	17,125,769	935,874	154,590	18,216,233
1981	17,336,862	4,250,591	21,587,453	1,311,735	98,017	20,177,701	774,562	927,591	297,430	642,325	500,501	221,878	16,813,414	844,826	175,702	17,833,942
1982	15,802,614	4,407,314	20,209,928	1,388,392	93,365	18,728,171	761,942	1,109,398	308,199	596,411	474,736	208,492	15,268,993	881,441	144,811	16,295,245
1983	14,146,668	4,450,426	18,597,095	1,458,054	94,962	17,044,081	789,632	978,249	(447,299)	490,042	642,061	221,937	14,369,459	865,268	131,894	15,366,621
1984	15,505,073	4,686,746	20,191,820	1,630,152	107,913	18,453,755	837,867	1,076,881	196,835	528,754	142,600	224,118	15,446,700	788,216	109,977	16,344,893
1985	14,528,147	5,006,326	19,534,475	1,915,197	94,778	17,524,500	816,370	966,047	(234,756)	503,766	354,065	326,497	14,792,511	892,256	126,363	15,811,130
1986	14,147,014	4,915,932	19,062,947	1,837,552	97,633	17,127,762	799,645	922,524	146,910	485,041	426,726	336,851	14,010,064	690,478	113,189[e]	14,813,731
1987	14,798,526	5,257,308	20,055,835	2,207,559	123,707	17,724,569	812,320	1,149,383	6,159	519,170	432,893	376,033	14,428,611	938,084	101,382	15,468,385
1988[R]	15,459,324	5,462,939	20,922,266	2,478,382	142,525	18,301,359	815,844	1,095,883	(69,293)	613,912	375,501	439,833	14,979,679	1,220,174	101,134	16,319,793
1989	15,735,849	5,262,981	20,998,830	2,451,342	140,532	18,406,956	784,502	1,070,452	(310,802)	630,083	182,217	362,457	15,688,047	1,274,649	106,745	17,079,657

a. Includes gas (mostly residue gas) blown to the air but does not include direct waste on producing properties, except where data are available.
b. "Marketed Production" equals "Total Gross Production" less "Repressuring" and "Vented and Flared." It includes an allowance for natural gas liquids content in the natural gas and nonhydrocarbon gases.
c. Defined as Domestic Dry Production For Sale plus Net Imports plus Supplemental Gas Supplies. See Table 3-16 for details on Supplemental Gas Supplies.
d. 1980 is the first year these data are available.
e. For detail see Table 3-16.
( ): Denotes negative.
R–Revised.
Note: 1990 data reported by U.S. Department of Energy, *Monthly Energy Review*, February 1991 are as follows: "Marketed Production (wet)—18,358,000 million of cubic feet (MMcf); "Net Imports"—1,406,000 MMcf; "Net Change in Underground Storage"—(520,000) MMcf.
Source: U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, 1989.

TABLE 3-10

TOTAL OFFSHORE PRODUCTION OF NATURAL GAS AND PERCENT STATE/FEDERALLY CONTROLLED, BY STATE, 1970–1990

	Alaska			California			Louisiana			Texas			Total		
		Percent			Percent			Percent			Percent			Percent	
Year	MMcf	State	OCS	MMcf	State	OCS	MMcf	State	OCS	MMcf	State	OCS	MMcf	State	OCS
1970	83,140	100	—	71,121	83	17	2,868,466	21	79	264,661	50	50	3,287,388	26	74
1971	86,326	100	—	61,448	74	26	3,207,475	18	82	235,600	67	33	3,590,850	23	77
1972	76,819	100	—	44,781	78	22	3,485,003	17	83	277,282	47	53	3,883,885	22	78
1973	74,655	100	—	37,883	81	19	3,612,878	15	85	251,038	41	59	3,976,454	19	81
1974	74,672	100	—	34,505	84	16	3,867,751	13	87	269,577	41	59	4,246,505	17	83
1975	76,295	100	—	27,272	85	15	3,840,631	13	87	220,530	44	56	4,164,727	17	83
1976	74,143	100	—	22,459	84	16	4,012,801	13	87	205,993	55	45	4,315,396	17	83
1977	77,540	100	—	17,527	81	19	4,133,610	12	88	268,250	68	32	4,496,927	17	83
1978	74,910	100	—	17,668	80	20	4,639,460	11	89	402,000	42	58	5,134,039	15	85
1979	73,792	100	—	16,417	82	18	4,635,487	10	90	719,208	29	71	5,444,904	14	86
1980	64,543	100	—	16,182	81	19	4,422,492	9	91	879,020	29	71	5,382,236	14	86
1981	72,307	100	—	26,237	51	49	4,480,934	8	92	966,983	24	76	5,546,462	12	88
1982	68,372	100	—	31,758	44	56	4,163,089	9	91	1,104,987	22	78	5,368,207	13	87
1983	68,837	100	—	29,878	46	54	3,490,146	9	91	998,951	15	85	4,587,812	12	88
1984	68,688	100	—	41,643	33	67	3,892,103	8	92	1,043,384	11	89	5,045,819	10	90
1985	62,796	100	—	68,647	28	72	3,346,856	7	93	943,057	11	89	4,421,357	9	91
1986	63,351	100	—	60,942	30	70	3,155,961	7	93	1,093,497	10	90	4,373,751	10	90
1987	61,233	100	—	53,991	24	76	3,401,277	7	93	1,303,074	8	92	4,819,576	8	92
1988	66,971	100	—	45,286	24	76	3,307,312	6	94	1,276,500	8	92	4,696,069	8	92
1989	82,116	100	—	37,603	24	76	3,206,577	6	94	1,276,619	9	91	4,602,915	9	91
1990P	104,812	100	—	46,537	17	83	3,884,987	5	95	1,457,071	7	93	5,493,407	7	93

Source: U.S. Department of the Interior, Minerals Management Service, *Federal Offshore Statistics.*
Note: Totals may not add due to independent rounding.
P–Preliminary.

TABLE 3-15
TRANSPORTATION VOLUMES DELIVERED TO END USERS, 1986-1989[a]

(MMCF)

Division and State	1986 Industrial	1986 Electric Generation	1987 Industrial	1987 Electric Generation	1988 Industrial	1988 Electric Generation	1989 Industrial	1989 Electric Generation
United States	**2,240,381**	**720,902**	**3,070,103**	**917,322**	**3,663,187**	**1,076,253**	**4,335,817**	**1,155,076**
New England	**28**	**11**	**3,010**	**1,676**	**1,367**	**2**	**3,062**	**6,940**
Connecticut	12	11	137	1,580	453	0	1,681	2,519
Maine	0	0	0	0	0	0	0	0
Massachusetts	16	0	2,307	96	254	2	566	4,079
New Hampshire	0	0	0	0	0	0	0	0
Rhode Island	0	0	566	0	660	0	815	342
Vermont	0	0	0	0	0	0	0	0
Middle Atlantic	**110,331**	**31,173**	**171,524**	**32,311**	**208,786**	**11,761**	**262,781**	**19,435**
New Jersey	8,688	5,952	22,806	925	27,017	315	32,598	1,144
New York	19,697	25,077	38,648	30,926	47,259	10,511	58,333	16,216
Pennsylvania	81,946	144	110,070	460	134,510	935	171,850	2,075
East North Central	**375,039**	**2,790**	**623,072**	**3,783**	**802,803**	**7,216**	**841,128**	**9,337**
Illinois	67,033	0	161,419	105	175,591	2,461	196,197	4,603
Indiana	61,473	0	136,458	0	167,798	1,979	172,022	2,933
Michigan	79,970	2,790	82,988	3,289	153,051	1,934	158,992	885
Ohio	147,617	0	173,127	252	227,745	0	233,517	301
Wisconsin	18,946	0	69,080	137	78,618	842	80,400	615
West North Central	**9,768**	**544**	**115,776**	**4,029**	**198,779**	**9,131**	**226,642**	**15,768**
Iowa	3,597	0	33,141	0	60,931	1,784	49,800	1,183
Kansas	3,049	518	51,647	2,934	68,052	4,003	78,314	9,827
Minnesota	1,192	7	10,142	0	34,281	1,463	42,966	1,553
Missouri	958	19	11,853	1,095	16,101	1,879	32,961	2,485
Nebraska	435	0	7,875	0	15,783	2	17,311	679
North Dakota	373	0	323	0	2,206	0	3,336	0
South Dakota	164	0	795	0	1,425	0	1,954	41
South Atlantic	**277,795**	**16,494**	**112,411**	**37,921**	**168,828**	**29,525**	**277,795**	**16,494**
Delaware	5,068	0	2,954	0	3,089	409	3,682	313
District of Columbia	0	0	0	0	0	0	0	0
Florida	3,211	37,805	5,241	27,111	18,054	16,059	19,078	11,526
Georgia	31,472	0	56,045	0	80,806	0	96,949	0
Maryland	31,008	0	39,362	0	39,873	0	44,669	0
North Carolina	2,890	116	12,292	185	13,263	840	24,687	1,593
South Carolina	422	0	7,308	0	13,667	0	15,959	0
Virginia	14,137	0	11,735	2,229	25,852	654	36,779	3,062
West Virginia	24,203	0	33,891	0	33,433	0	35,992	0
East South Central	**119,527**	**12,116**	**145,515**	**14,652**	**181,791**	**26,896**	**226,582**	**47,241**
Alabama	27,643	775	51,415	1,079	70,229	886	93,168	1,456
Kentucky	20,113	0	32,085	0	37,451	0	44,164	0
Mississippi	40,908	11,341	32,042	13,573	40,868	26,010	49,098	45,785
Tennessee	30,863	0	29,973	0	33,243	0	40,152	0
West South Central	**1,390,469**	**618,511**	**1,489,407**	**702,703**	**1,685,691**	**895,316**	**1,997,016**	**852,132**
Arkansas	48,694	0	29,024	0	79,343	0	104,237	19,593
Louisiana	323,895	176,140	316,840	192,026	331,658	181,223	471,383	170,098
Oklahoma	93,807	180,481	141,058	169,756	97,836	163,015	89,950	166,455
Texas	924,073	261,890	1,002,485	340,921	1,176,854	551,078	1,331,446	495,986
Mountain	**24,043**	**188**	**60,562**	**33,130**	**106,244**	**45,697**	**126,188**	**73,647**
Arizona	0	0	2,429	21,619	17,155	20,431	11,478	25,708
Colorado	10,921	188	13,390	5,919	23,309	4,603	29,106	5,624
Idaho	2,032	0	12,746	0	19,961	0	22,781	0
Montana	1,254	0	1,952	0	1,101	0	2,600	0
Nevada	0	0	4,098	5,108	4,964	6,903	6,966	22,374
New Mexico	0	0	8,448	484	11,611	13,760	15,473	19,941
Utah	0	0	6,099	0	16,092	0	24,288	0
Wyoming	9,836	0	11,400	0	12,051	0	13,496	0
Pacific	**98,764**	**17,647**	**292,408**	**95,512**	**249,691**	**62,273**	**374,623**	**114,082**
Alaska	19,257	11,742	18,100	6,297	30,824	5,908	26,605	6,773
California	68,982	5,905	263,991	89,215	171,228	55,488	283,611	87,126
Hawaii	0	0	0	0	0	0	0	0
Oregon	5,255	0	4,483	0	26,019	0	34,133	13,148
Washington	5,270	0	5,834	0	21,620	877	30,274	7,035
Other States	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

[a] Is part of the total deliveries to end users as shown in Table 3-14.

Source: U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, 1989.

TABLE 3-16
SUPPLEMENTAL GAS SUPPLIES BY STATE, 1989

(Millions of Cubic Feet)

Division and State	Total	Synthetic Natural Gas	Propane-Air	Refinery Gas	Other[a]
United States	**106,744**	**67,190**	**6,889**	**14,661**	**18,004**
New England	**1,754**	**139**	**1,615**	**0**	**0**
Connecticut	251	0	251	0	0
Maine	0	0	0	0	0
Massachusetts	692	139	553	0	0
New Hampshire	592	0	592	0	0
Rhode Island	219	0	219	0	0
Vermont	0	0	0	0	0
Middle Atlantic	**16,083**	**363**	**464**	**14,010**	**1,245**
New Jersey	14,539	363	10	14,010	155[b]
New York	1,239	0	149	0	1,090[c]
Pennsylvania	305	0	305	0	0
East North Central	**15,744**	**9,407**	**655**	**651**	**5,031**
Illinois	9,477	9,407	70	0	0
Indiana	3,512	0	229	651	2,632[d]
Michigan	2,402	0	3	0	2,399[e]
Ohio	348	0	348	0	0
Wisconsin	5	0	5	0	0
West North Central	**58,784**	**54,403**	**2,322**	**0**	**2,059**
Iowa	82	0	28	0	54[c]
Kansas	0	0	0	0	0
Minnesota	315	0	315	0	0
Missouri	1,875	0	1,875	0	0
Nebraska	2,088	0	84	0	2,005[e]
North Dakota	54,408	54,403	4	0	0
South Dakota	16	0	16	0	0
South Atlantic	**1,838**	**34**	**1,601**	**0**	**203**
Delaware	18	0	18	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	292	0	89	0	203[c]
Maryland	899	34	865	0	0
North Carolina	0	0	0	0	0
South Carolina	201	0	201	0	0
Virginia	428	0	428	0	0
West Virginia	0	0	0	0	0
East South Central	**138**	**0**	**138**	**0**	**0**
Alabama	16	0	16	0	0
Kentucky	44	0	44	0	0
Mississippi	0	0	0	0	0
Tennessee	78	0	78	0	0
West South Central	**9**	**0**	**9**	**0**	**0**
Arkansas	0	0	0	0	0
Louisiana	0	0	0	0	0
Oklahoma	0	0	0	0	0
Texas	9	0	9	0	0
Mountain	**9,394**	**0**	**71**	**0**	**9,323**
Arizona	0	0	0	0	0
Colorado	9,190	0	34	0	9,156[e]
Idaho	0	0	0	0	0
Montana	0	0	0	0	0
Nevada	37	0	37	0	0
New Mexico	0	0	0	0	0
Utah	0	0	0	0	0
Wyoming	167	0	0	0	167[e]
Pacific	**3,001**	**2,844**	**14**	**0**	**143**
Alaska	0	0	0	0	0
California	0	0	0	0	0
Hawaii	2,844	2,844	0	0	0
Oregon	3	0	3	0	0
Washington	154	0	11	0	143[e]
Other States	**0**	**0**	**0**	**0**	**0**

a. Includes coke oven gas, manufactured gas, biomass gas, and air injection for Btu stabilization.
b. Manufactured gas.
c. Biomass gas.
d. Coke oven gas.
e. Air injection for Btu stabilization.
f. Less than 500,000 cubic feet.

Source: U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, 1989.

TABLE 3-17
NUMBER OF PRODUCING GAS WELLS, BY STATE, 1975-1990[a]

Division and State	1975	1980	1985	1987	1988	1989[R]	1990[P]
United States	**132,095**	**182,004**	**243,344**	**249,225**	**257,279**	**262,483**	**264,558**
New England	**0**	**0**		**0**	**0**	**0**	**0**
Middle Atlantic	**18,200**	**21,976**	**31,000**	**32,967**	**33,090**	**35,304**	**35,406**
New Jersey	0	0	0	0	0	0	0
New York	900	2,076	4,500	5,167	5,090	5,304	5,406
Pennsylvania	17,300	19,900	26,500	27,800	28,000	30,000	30,000
East North Central	**11,110**	**18,442**	**33,393**	**35,805**	**36,369**	**37,208**	**37,802**
Illinois	41	70	123	169	293	241	356
Indiana	478	698	1,272	1,298	1,295	1,310	1,311
Michigan	209	423	655	722	988	1,207	1,438
Ohio	10,382	17,251	31,343	33,616	33,793	34,450	34,697
Wisconsin	0	0	0	0	0	0	0
West North Central	**8,925**	**12,935**	**16,109**	**13,767**	**15,434**	**14,068**	**14,198**
Iowa	0	0	0	0	0	0	0
Kansas	8,865	12,820	15,980	13,631	15,300	13,935	14,043
Minnesota	0	0	0	0	0	0	0
Missouri	3	0	4	3	4	4	0
Nebraska	19	22	19	20	18	15	0
North Dakota	18	80	62	61	61	61	103
South Dakota	20	13	44	52	51	53	52
South Atlantic	**21,901**	**26,167**	**32,977**	**34,997**	**36,536**	**37,000**	**37,819**
Delaware	0	0	0	0	0	0	0
District of Columbia	0	0	0	0	0	0	0
Florida	0	0	0	0	0	0	0
Georgia	0	0	0	0	0	0	0
Maryland	15	9	7	8	8	8	0
North Carolina	0	0	0	0	0	0	0
South Carolina	0	0	0	0	0	0	0
Virginia	186	258	495	689	728	752	819
West Virginia	21,700	25,900	32,475	34,300	35,800	36,240	37,000
East South Central	**7,684**	**8,922**	**11,846**	**13,116**	**13,477**	**14,192**	**14,907**
Alabama	45	314	863	1,135	1,264	1,701	2,038
Kentucky	7,386	7,984	9,285	10,366	10,777	11,248	11,713
Mississippi	248	447	710	775	634	543	629
Tennessee	5	177	988	840	802	700	527
West South Central	**48,440**	**71,447**	**88,415**	**88,707**	**94,962**	**95,191**	**89,175**
Arkansas	1,128	1,114	2,623	2,847	2,996	2,830	3,460
Louisiana	11,359	16,190	16,716	15,890	14,071	16,309	13,530
Oklahoma	9,769	16,419	24,756	25,762	27,307	27,443	24,110
Texas	26,184	37,724	44,320	43,375	50,588	48,609	48,075
Mountain	**14,189**	**20,914**	**27,945**	**28,477**	**25,837**	**28,180**	**30,235**
Arizona	1	1	1	0	0	3	0
Colorado	1,380	2,997	4,401	4,530	4,426	5,125	5,097
Idaho	0	0	0	0	0	0	0
Montana	1,235	1,881	2,260	2,349	2,553	2,700	2,428
Nevada	0	0	0	0	0	0	0
New Mexico	10,352	14,571	18,308	18,806	15,909	17,087	19,537
Utah	271	200	755	645	665	834	742
Wyoming	950	1,264	2,220	2,147	2,284	2,431	2,431
Pacific	**1,646**	**1,201**	**1,659**	**1,389**	**1,574**	**1,340**	**1,278**
Alaska	61	71	84	85	91	108	109
California	1,585	1,125	1,566	1,294	1,469	– 1,214	1,169
Hawaii	0	0	0	0	0	0	0
Oregon	0	5	9	10	14	18	0
Washington	0	0	0	0	0	0	0
Other States	**0**	**0**	**0**	**0**	**0**	**0**	**147[c]**
Federal Waters	**b**	**b**	**b**	**b**	**b**	**b**	**3,591**

a. Data pertain only to dry gas and condensate wells. Data as of December 31.
b. "Federal Waters" is included in Texas, Louisiana, and California totals.
c. Includes Arizona, Maryland, Missouri, Nebraska, Nevada, Oregon.
R–Revised. P–Preliminary.
Source: Preliminary numbers taken from *World Oil*, February, 1991. Revised numbers taken from U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, 1989.

TABLE 3-18
NEW GAS WELL COMPLETIONS, BY STATE, 1975-1990[a]

Division and State	1975	1980	1985	1987	1988R	1989R	1990P
United States	**8,169**	**17,132**	**12,875**[b]	**7,697**	**8,254**	**8,740**	**7,170**
New England	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Middle Atlantic	**964**	**1,634**	**1,777**	**1,145**	**938**	**858**	**263**
New Jersey	0	0	0	0	0	0	0
New York	362	368	312	221	147	83	2
Pennsylvania	602	1,266	1,465	924	791	775	261
East North Central	**835**	**2,795**	**1,208**	**648**	**802**	**1,072**	**857**
Illinois	5	14	38	19	50	44	7
Indiana	17	46	24	15	31	10	9
Michigan	34	52	42	124	317	612	647
Ohio	779	2,683	1,104	490	404	406	194
Wisconsin	0	0	0	0	0	0	0
West North Central	**501**	**681**	**512**	**419**	**660**	**580**	**433**
Iowa	0	0	0	0	0	0	0
Kansas	499	642	502	410	655	569	428
Minnesota	0	0	0	0	0	0	0
Missouri	1	2	2	0	0	0	2
Nebraska	1	3	1	1	0	8	0
North Dakota	0	14	4	2	1	3	3
South Dakota	0	20	3	6	4	0	0
South Atlantic	**595**	**1,545**	**1,250**	**770**	**624**	**753**	**617**
Delaware	0	0	0	0	0	0	0
District of Columbia	0	0	0	0	0	0	0
Florida	0	1	1	0	0	0	0
Georgia	0	0	0	0	0	0	0
Maryland	0	0	0	0	0	0	0
North Carolina	0	0	0	0	0	0	0
South Carolina	0	0	0	0	0	0	0
Virginia	26	17	84	17	26	16	6
West Virginia	569	1,527	1,165	753	598	737	611
East South Central	**242**	**581**	**683**	**578**	**715**	**835**	**875**
Alabama	34	64	116	133	184	373	676
Kentucky	128	191	415	340	469	392	143
Mississippi	32	69	58	37	28	52	43
Tennessee	48	257	94	68	34	18	13
West South Central	**3,872**	**7,627**	**5,720**	**3,334**	**3,426**	**3,348**	**2,642**
Arkansas	24	121	256	171	190	127	102
Louisiana	830	1,787	1,007	535	579	497	309
Oklahoma	667	2,146	1,483	1,008	957	885	710
Texas	2,351	3,573	2,974	1,620	1,700	1,839	1,521
Mountain	**1,108**	**2,179**	**1,195**	**714**	**975**	**1,206**	**1,395**
Arizona	0	0	0	0	0	0	2
Colorado	268	546	399	333	485	483	487
Idaho	0	0	0	0	0	0	0
Montana	265	226	83	71	73	128	157
Nevada	0	1	0	0	0	0	0
New Mexico	464	1,061	577	227	318	425	593
Utah	16	97	62	23	27	17	11
Wyoming	95	248	74	60	72	153	145
Pacific	**52**	**90**	**123**	**86**	**101**	**71**	**86**
Alaska	3	2	0	4	3	2	4
California	49	86	120	75	91	69	80
Hawaii	0	0	0	0	0	0	0
Oregon	0	2	3	2	7	0	2
Washington	0	0	0	0	0	0	0
Federal Waters	**0**	**0**	**206**	**3**	**13**	**13**	**2**

a. Data are published "as reported"; therefore, recent periods are incomplete and understate actual drilling levels. See detailed explanation at the beginning of this section.

b. Reflects API estimates. State totals do not add to U.S. total. See Footnote a.

R–Revised. P–Preliminary.

Source: American Petroleum Institute, *Well Completions and Footage Drilled in the U.S.* (Data for 1975, 1980 and 1985); *Quarterly Completion Report*, Fourth Quarter, 1986 (1984 Data); Fourth Quarter, 1985 (1983 Data); Second Quarter, 1987 (1985 Data); Fourth Quarter, 1989 (1986 and 1987 data); Fourth Quarter, 1990 (1988, 1989 and 1990 data).

TABLE 3-19
NEW FIELD WILDCAT WELLS DRILLED AND PROPORTION SUCCESSFUL 1971-1990[a]

Year	Total Drilled	Dry	Productive	Percent Productive
1971	4,636	4,161	475	10.2
1972	5,011	4,454	557	11.1
1973	5,096	4,346	750	14.7
1974	5,946	5,084	862	14.5
1975	6,238	5,315	923	14.8
1976	5,856	4,871	985	16.8
1977	6,162	5,170	992	16.1
1978	6,731	5,603	1,128	16.8
1979	6,423	5,203	1,220	19.0
1980	7,332	5,973	1,359	18.5
1981	9,151	7,563	1,588	17.4
1982	7,386	6,061	1,325	17.9
1983	6,057	5,063	994	16.4
1984	6,528	5,545	983	15.1
1985	5,569	4,801	768	13.8
1986	3,484	2,996	488	14.0
1987	3,515	3,007	508	14.5
1988^{R}	3,271	2,807	464	14.2
1989^{R}	2,612	2,248	364	13.9
1990^{P}	2,094	1,816	278	13.3

a. Data are published "as reported"; therefore, recent periods are incomplete and understate actual drilling levels. See detailed explanation at the beginning of this section.

R–Revised. P–Preliminary.

Source: American Petroleum Institute, *Quarterly Completion Report*, Fourth Quarter, 1990.

TABLE 3-20
NEW WELL COMPLETIONS, BY TYPE OF WELL, 1971-1990[a]

Year	Total[b]	Oil	Gas	Dry	Service[c]
1971	26,268	11,903	3,983	10,382	1,365
1972	27,934	11,437	5,484	11,013	1,458
1973	27,692	10,251	6,975	10,466	908
1974	33,037	13,664	7,168	12,205	1,132
1975	38,884	16,979	8,169	13,736	1,612
1976	40,940	17,697	9,438	13,805	1,528
1977	45,855	18,700	12,119	15,036	1,320
1978	50,061	19,065	14,405	16,591	1,547
1979	51,890	20,689	15,166	16,035	1,424
1980	69,486	32,120	17,132	20,234	1,952
1981	89,234	42,520	19,742	26,972	2,223
1982	83,889	39,252	18,810	25,827	2,051
1983	75,738	37,396	14,505	23,837	1,917
1984	84,983	44,472	14,962	25,549	2,104
1985	70,708	36,374	12,875	21,459	1,627
1986	38,241	18,272	7,862	12,107	755
1987	34,661	15,881	7,697	11,083	858
1988^{R}	31,526	13,290	8,254	9,982	926
1989^{R}	26,811	9,977	8,740	8,094	563
1990^{P}	22,437	8,674	7,170	6,593	401

a. See detailed explanation at the beginning of this section.

b. Includes Oil, Gas and Dry, but not service.

c. Excludes stratigraphic and core tests. Based on "as reported" data. Not included in Total.

R–Revised. P–Preliminary.

Source: Oil and Gas Journal prior to 1968, American Petroleum Institute, *Quarterly Completion Report*, Fourth Quarter, 1990.

Note: All data from 1982-1990 reflect API estimates except service.

TABLE 3-21
NEW WELL COMPLETIONS, BY TYPE OF WELL AND STATE, 1990[a]

Division and State	Total[b]	Oil	Gas	Dry	Service
United States	**22,437**	**8,674**	**7,170**	**6,593**	**400**
New England	**0**	**0**	**0**	**0**	**0**
Middle Atlantic	**288**	**1**	**263**	**24**	**0**
New Jersey	0	0	0	0	0
New York	9	0	2	7	0
Pennsylvania	279	1	261	17	0
East North Central	**2,298**	**874**	**857**	**567**	**36**
Illinois	628	335	7	286	32
Indiana	117	38	9	70	1
Michigan	804	15	647	142	3
Ohio	749	486	194	69	0
Wisconsin	0	0	0	0	0
West North Central	**2,349**	**833**	**433**	**1,085**	**0**
Iowa	2	0	0	2	0
Kansas	2,037	674	428	937	0
Minnesota	0	0	0	0	0
Missouri	7	2	2	3	0
Nebraska	106	28	0	78	0
North Dakota	186	124	3	59	0
South Dakota	11	5	0	6	0
South Atlantic	**649**	**20**	**617**	**12**	**0**
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	10	0	0	10	0
Georgia	0	0	0	0	0
Maryland	0	0	0	0	0
North Carolina	0	0	0	0	0
South Carolina	0	0	0	0	0
Virginia	6	0	6	0	0
West Virginia	633	20	611	2	0
East South Central	**1,472**	**184**	**875**	**413**	**2**
Alabama	823	27	676	120	0
Kentucky	368	83	143	142	2
Mississippi	252	63	43	146	0
Tennessee	29	11	13	5	0
West South Central	**10,901**	**4,640**	**2,642**	**3,619**	**231**
Arkansas	280	46	102	132	0
Louisiana	1,291	342	309	640	0
Oklahoma	2,206	821	710	675	43
Texas	7,124	3,431	1,521	2,172	188
Mountain	**2,811**	**705**	**1,395**	**711**	**69**
Arizona	4	0	2	2	0
Colorado	837	105	487	245	2
Idaho	0	0	0	0	0
Montana	262	25	157	80	2
Nevada	28	9	0	19	3
New Mexico	1,060	347	593	120	18
Utah	69	36	11	22	0
Wyoming	551	183	145	223	44
Pacific	**1,621**	**1,414**	**86**	**121**	**62**
Alaska	85	74	4	7	8
California	1,533	1,340	80	113	54
Hawaii	0	0	0	0	0
Oregon	3	0	2	1	0
Washington	0	0	0	0	0
Federal Waters	**48**	**3**	**2**	**41**	**0**

a. Based on "as reported" data; therefore data understates actual levels of drilling activity. See detailed explanation at the beginning of this section.

b. Excludes service wells, stratigraphic and core tests.

Source: American Petroleum Institute, *Quarterly Completion Report.*

TABLE 3-22
HOLES DRILLED AND PROPORTION SUCCESSFUL, BY TYPE OF EXPLORATION HOLE
1975-1990

	Outposts-Extensions	New-Pool Wildcats	Deeper-Pool Tests	Shallower-Pool Tests	New-Field Wildcats	Total
1975						
Drilled	1,577	1,112	288	133	6,104	9,214
Dry	905	719	181	38	5,228	7,071
Productive	672	393	107	95	876	2,143
Percent Productive	42.6	35.3	37.2	71.4	14.4	23.3
1980						
Drilled	1,981	1,819	789	293	7,034	11,916
Dry	1,104	952	523	69	5,694	8,342
Productive	877	867	266	224	1,340	3,574
Percent Productive	44.3	47.7	33.7	76.4	19.1	30.0
1983						
Drilled	2,498	2,281	1,979	640	6,489	13,887
Dry	1,437	1,340	1,491	288	5,351	9,907
Productive	1,061	941	488	352	1,138	3,980
Percent Productive	42.5	41.3	24.7	55.0	17.5	28.7
1984						
Drilled	3,340	2,580	2,311	758	6,088	15,077
Dry	2,077	1,618	1,869	384	5,208	11,156
Productive	1,263	962	442	374	880	3,921
Percent Productive	37.8	37.3	19.1	49.3	14.5	26.0
1985						
Drilled	2,510	2,343	2,013	602	6,364	13,832
Dry	1,473	1,356	1,627	291	5,355	10,102
Productive	1,037	987	386	311	1,009	3,730
Percent Productive	41.3	42.1	19.2	51.7	15.9	27.0
1986						
Drilled	1,596	579	1,709	391	4,731	9,006
Dry	888	162	1,485	210	4,039	6,784
Productive	708	417	224	181	692	2,222
Percent Productive	44.4	72.0	13.1	46.3	14.6	24.7
1987						
Drilled	1,251	367	1,357	310	3,716	7,001
Dry	744	117	1,174	174	3,210	5,419
Productive	507	250	183	136	506	1,582
Percent Productive	40.5	68.1	13.5	43.9	13.6	22.6
1988						
Drilled	1,183	556	1,136	217	3,462	6,554
Dry	683	263	962	135	2,993	5,036
Productive	500	293	174	82	469	1,518
Percent Productive	42.3	52.7	15.3	37.8	13.6	23.2
1989						
Drilled	1,102	406	998	239	2,933	5,678
Dry	677	158	869	127	2,552	4,383
Productive	425	248	129	112	381	1,295
Percent Productive	38.6	61.1	12.9	46.9	13.0	22.8
1990						
Drilled	934	270	887	186	2,532	4,809
Dry	510	90	756	121	2,147	3,624
Productive	424	180	131	65	385	1,185
Percent Productive	45.4	66.7	14.8	34.9	15.2	24.6

Source: Committee on Statistics of Drilling, *American Association of Petroleum Geologists Bulletin*, 1975-1989; American Petroleum Institute for 1990 data.

TABLE 3-23
EXPLORATORY WELLS AND DRY HOLES DRILLED, BY STATE AND TYPE OF WELL, 1990[a]

Division and State	Total Drilled	Dry Holes	Producers Total	Producers Oil	Producers Gas
United States	**4,768**	**3,600**	**1,168**	**613**	**555**
New England	**0**	**0**	**0**	**0**	**0**
Middle Atlantic	**39**	**17**	**22**	**0**	**22**
New Jersey	0	0	0	0	0
New York	3	2	1	0	1
Pennsylvania	36	15	21	0	21
East North Central	**410**	**340**	**70**	**32**	**38**
Illinois	178	158	20	11	9
Indiana	47	37	10	5	5
Michigan	134	115	19	6	13
Ohio	51	30	21	10	11
Wisconsin	0	0	0	0	0
West North Central	**1,085**	**771**	**314**	**257**	**57**
Iowa	2	2	0	0	0
Kansas	856	631	225	169	56
Minnesota	0	0	0	0	0
Missouri	3	3	0	0	0
Nebraska	85	67	18	18	0
North Dakota	130	61	69	69	0
South Dakota	9	7	2	1	1
South Atlantic	**10**	**10**	**0**	**0**	**0**
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	9	9	0	0	0
Georgia	0	0	0	0	0
Maryland	0	0	0	0	0
North Carolina	0	0	0	0	0
South Carolina	0	0	0	0	0
Virginia	0	0	0	0	0
West Virginia	1	1	0	0	0
East South Central	**304**	**219**	**85**	**36**	**49**
Alabama	109	74	35	9	26
Kentucky	65	55	10	7	3
Mississippi	126	87	39	20	19
Tennessee	4	3	1	0	1
West South Central	**2,032**	**1,574**	**458**	**186**	**272**
Arkansas	56	44	12	9	3
Louisiana	243	227	16	8	8
Oklahoma	256	176	80	26	54
Texas	1,477	1,127	350	143	207
Mountain	**734**	**540**	**194**	**93**	**101**
Arizona	0	0	0	0	0
Colorado	272	210	62	24	38
Idaho	0	0	0	0	0
Montana	80	60	20	9	11
Nevada	22	19	3	3	0
New Mexico	79	44	35	24	11
Utah	22	14	8	7	1
Wyoming	259	193	66	26	40
Pacific	**104**	**79**	**25**	**9**	**16**
Alaska	5	2	3	3	0
California	98	77	21	5	16
Hawaii	0	0	0	0	0
Oregon	1	0	1	1	0
Washington	0	0	0	0	0
Federal Waters	**50**	**50**	**0**	**0**	**0**

a. See detailed explanation at the beginning of this section.
Source: American Petroleum Institute, *Quarterly Completion Report*, Second Quarter 1991.

TABLE 3-24
DRILLING OPERATIONS AND EXPENDITURES, BY TYPE OF WELL, 1988-1989[a]

	Total	Oil	Gas[b]	Dry
		1988		
Wells drilled	29,741	12,434	7,820	9,487
Footage drilled (000)	150,216	55,781	42,522	51,912
Expenditures (000)	$10,549,522	$ 3,474,161	$3,599,505	$3,475,856
Average depth per well (ft)	5,051	4,486	5,438	5,472
Average cost per well	$ 354,713	$ 279,408	$ 460,295	$ 366,381
Average cost pe[illegible]	$ 70.23	$ 62.28	$ 84.64	$ 66.96
		1989		
Wells drilled	26,693	9,865	8,830	7,998
Footage drilled (000)	131,474	42,895	46,538	42,041
Expenditures (000)	$ 9,669,339	$ 2,784,625	$4,042,289	$2,842,425
Average depth per well (ft)	4,925	4,348	5,270	5,256
Average cost per well	$ 362,243	$ 282,273	$ 457,790	$ 355,392
Average cost per foot	$ 73.55	$ 64.92	$ 86.87	$ 67.62

a. Includes all charges for drilling and equipping wells up to and including the "Christmas" trees, but excludes exploration, development and production costs and expenditures for service wells.
b. Includes condensate wells.
Source: American Petroleum Institute, *Joint Association Survey on Drilling Costs*, December 1990.

TABLE 3-25
OFFSHORE DRILLING OPERATIONS AND EXPENDITURES, BY TYPE OF WELL, 1988-1989[a]

	Total	Oil	Gas[b]	Dry
		1988		
Wells drilled	866	183	192	491
Footage drilled (000)	9,334	1,859	2,164	5,311
Expenditures (000)	$2,694,627	$ 526,696	$ 692,151	$1,475,780
Average depth per well (ft)	10,779	10,161	11,269	10,817
Average cost per well	$3,111,579	$2,878,120	$3,604,952	$3,005,663
Average cost per foot	$ 288.67	$ 283.25	$ 319.90	$ 277.86
		1989		
Wells drilled	746	158	223	365
Footage drilled (000)	7,721	1,677	2,257	3,788
Expenditures (000)	$2,385,126	$ 481,970	$ 695,767	$1,207,389
Average depth per well (ft)	10,350	10,614	10,120	10,377
Average cost per well	$3,197,220	$3,050,443	$3,120,030	$3,307,916
Average cost per foot	$ 308.91	$ 287.40	$ 308.30	$ 318.77

a. Includes all charges for drilling and equipping wells up to and including the "Christmas" trees, but excludes exploration, development and production costs and expenditures for service wells.
b. Includes condensate wells.
Source: American Petroleum Institute, *Joint Association Survey on Drilling Costs*, December 1990.

TABLE 3-26
AVERAGE COST PER FOOT BY TYPE OF WELL, BY DEPTH CLASSES, 1985-1989[a]

Depth Range (in feet)	Total	Oil	Gas	Dry
1985				
0- 1,249	$ 35.39	$ 38.32	$ 36.38	$ 25.79
1,250- 2,499	38.81	44.40	41.28	24.64
2,500- 3,749	39.10	44.36	42.05	27.53
3,750- 4,999	38.62	45.71	40.14	28.09
5,000- 7,499	50.58	58.29	53.46	38.04
7,500- 9,999	76.85	76.13	90.81	68.99
10,000-12,499	113.68	10[illegible].56	127.28	113.25
12,500-14,999	171.90	157.41	204.18	155.54
15,000-17,499	276.97	285.93	299.27	258.17
17,500-19,999	323.87	390.31	316.85	317.55
20,000 and over	506.29	272.77	505.90	525.57
1986				
0- 1,249	$ 34.70	$ 39.47	$ 39.13	$ 21.30
1,250- 2,499	36.49	41.39	40.57	24.51
2,500- 3,749	37.31	43.27	40.36	24.64
3,750- 4,999	32.98	36.87	37.04	25.41
5,000- 7,499	46.36	53.14	47.45	37.61
7,500- 9,999	73.17	74.37	77.66	67.97
10,000-12,499	114.20	128.76	120.11	94.44
12,500-14,999	177.23	165.90	207.39	164.08
15,000-17,499	283.52	259.14	309.14	271.09
17,500-19,999	310.98	337.88	346.10	283.70
20,000 and over	596.27	478.83	640.53	597.67
1987				
0- 1,249	$ 34.16	$ 40.10	$ 32.64	$ 19.05
1,250- 2,499	35.60	41.22	40.76	21.01
2,500- 3,749	33.93	36.65	42.86	22.64
3,750- 4,999	30.68	34.90	35.39	22.87
5,000- 7,499	38.06	45.15	39.05	29.02
7,500- 9,999	59.83	66.93	64.63	42.83
10,000-12,499	95.09	116.55	97.03	74.14
12,500-14,999	137.43	155.39	139.25	125.24
15,000-17,499	183.23	175.43	196.91	172.48
17,500-19,999	239.08	108.70	230.19	255.61
20,000 and over	581.66	—	425.86	680.53
1988				
0- 1,249	$ 36.44	$ 46.26	$ 33.41	$ 18.00
1,250- 2,499	40.07	45.11	47.74	22.40
2,500- 3,749	39.34	40.97	52.00	23.57
3,750- 4,999	32.68	36.49	37.79	24.33
5,000- 7,499	40.60	46.53	43.28	31.98
7,500- 9,999	65.64	67.35	72.03	57.96
10,000-12,499	108.96	113.43	119.09	98.05
12,500-14,999	152.97	149.77	170.42	140.24
15,000-17,499	227.20	204.85	245.84	217.97
17,500-19,999	268.91	269.96	293.34	250.93
20,000 and over	454.54	198.09	552.09	422.40
1989				
0- 1,249	$ 41.39	$ 51.30	$ 49.57	$ 17.56
1,250- 2,499	42.58	47.62	51.58	20.27
2,500- 3,749	40.54	40.53	52.72	23.65
3,750- 4,999	34.60	36.83	46.71	21.95
5,000- 7,499	42.34	46.82	48.01	31.69
7,500- 9,999	72.94	67.38	88.67	59.71
10,000-12,499	117.81	124.35	118.51	112.03
12,500-14,999	148.30	150.39	163.85	131.45
15,000-17,499	234.19	302.25	244.52	213.13
17,500-19,999	300.57	320.30	368.24	241.41
20,000 and over	629.21	—	580.96	659.60

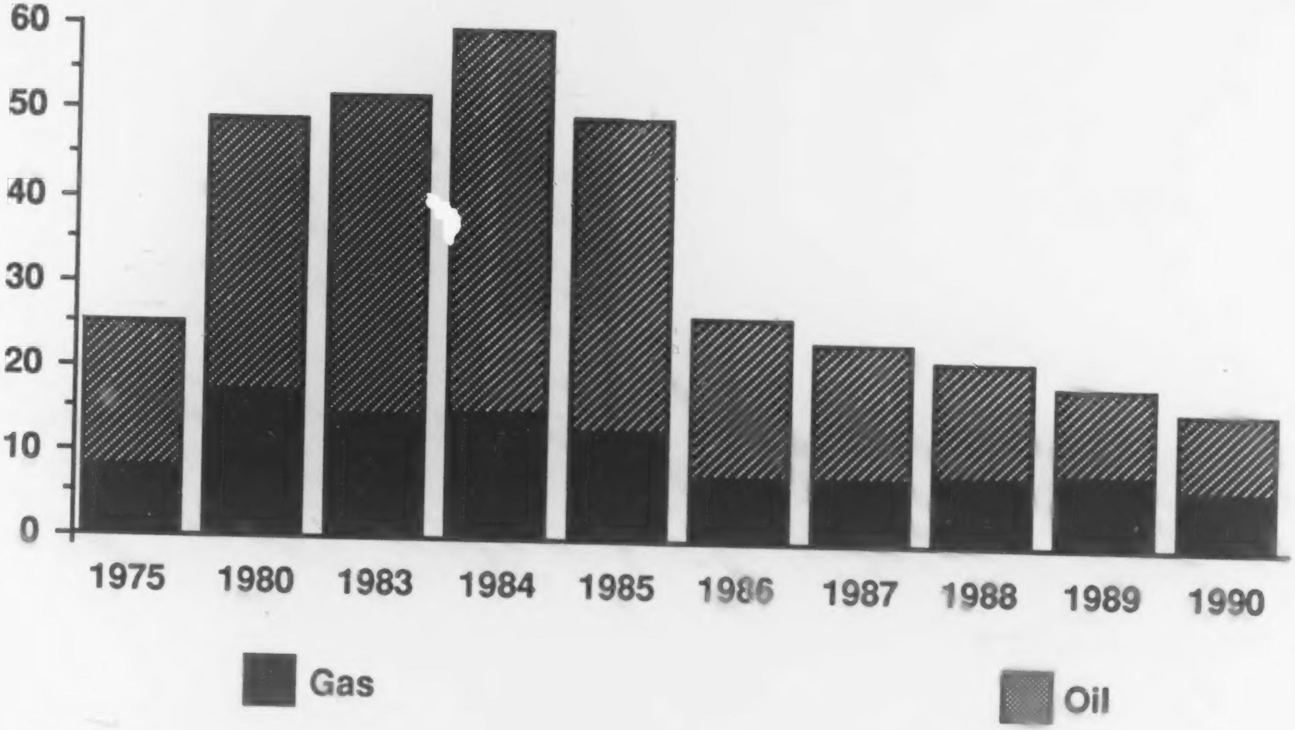
[a] Includes all charges for drilling and equipping wells up to and including the "Christmas" trees but excludes exploration, development and production costs and expenditures for service wells.

Source: American Petroleum Institute, *Joint Association Survey on Drilling Costs*, December 1989.

CHART 3-2

TOTAL GAS AND OIL NEW WELL COMPLETIONS

(THOUSANDS)



REFERENCE: TABLE 3-21

GAS FACTS

TABLE 3-27
SELECT WORLD NATURAL GAS STATISTICS
1989

Country	Production	Imports	Exports	Gross Consumption	Residential Consumers (000)	Miles of Pipeline (000)
	(Trillions of Btu)					
Austria	45.1	136.9	—	190.0	970[b]	7.8[b]
Belgium	0.4	337.7	10.1	319.1	1,981	21.9
Canada	3,947.7	27.6	1,357.9	2,645.0	3,336	136.1[a]
Czechoslovakia	20.6	398.2	19.3	385.1	2,632[a]	20.4[b]
Denmark	99.5	—	32.7	59.4	357[d]	2.7[d]
Finland	—	73.9	—	73.9	92[a]	0.8[a]
France	103.5	907.7	25.7	970.7	8,769	90.8
German Democratic Republic	107.8	236.0	8.1	331.4	3,469	26.8
Federal Republic of Germany	467.4	1,450.7	33.4	1,861.3	9,900	126.1
Greece	5.4	—	—	5.4	6	0.3
Hungary	187.4	193.3	0.7	371.9	1,559	12.3
Ireland	72.8	—	—	72.8	147[a]	0.4[a]
Italy	545.9	929.8	0.3	1,463.3	11,200	87.9
Luxembourg	—	16.3	—	16.3	59[c]	0.6[c]
Netherlands	2,152.1	77.8	991.3	1,238.8	5,241[b]	59.7[b]
Norway	1,102.4	—	989.0	113.4	2[e]	0.1[c]
Poland	137.5	252.4	.02	377.9	5,475	34.3
Spain	54.4	121.6	−0.2	176.2	1,722[a]	8.1[a]
Switzerland	0.1	61.0	—	61.2	482[a]	6.7[a]
USSR	29,594.2	32.7	3,329.4	26,264.9	68,349[a]	268.9[a]
United Kingdom	1,497.4	355.7	—	1,852.5	16,500[b]	150.0[b]
United States	16,302.0	1,300.6	66.1	17,867.8	47,710[b]	1,056.4[b]
Yugoslavia	84.5	149.8	—	234.2	418	4.6

a. 1988 data.
b. 1987 data.
c. 1986 data.
d. 1984 data.
e. 1983 data.
Source: United Nations, *Annual Bulletin of Gas Statistics for Europe*. 1989.

TABLE 3-28
WORLD WELL COMPLETIONS
1988[a]

Area	Oil	Gas	Dry	Service	Suspended	Total Wells[b]	Total Footage
North America	15,959	9,166	11,374	1,066	34	37,599[c]	177,217,122
South America	2,007	85	460	96	13	2,661	15,598,420
Far East	5,829	158	218	1,771	96	10,022	58,190,278
Western Europe	308	277	250	46	49	930	8,120,771
Middle East	342	35	83	28	38	690	4,700,896
Africa	200	37	125	52	10	589	4,878,189
Oceania	96	67	157	0	24	344	2,183,518
World Total	24,741	9,825	12,667	3,059	264	52,835	270,889,194

a. No drilling data available for Eastern Europe and USSR.
b. 1988 wells drilled totals and subtotals may not add horizontally due to lack of breakdown in some countries.
c. Includes actual United States well count by American Petroleum Institute. Number will increase as additional well completions are reported to API.
Source: *World Oil*, August 1989.

WORLD WELL COMPLETIONS
1989[a]

Area	Oil	Gas	Dry	Service	Suspended	Total Wells[b]	Total Footage
North America	11,110	10,338	9,257	733	21	31,459[c]	146,313,142
South America	1,662	64	352	73	35	2,186	12,569,588
Far East	6,669	149	103	1,582	13	10,790	60,331,648
Western Europe	207	161	196	56	111	731	6,690,111
Middle East	509	28	78	96	38	885	5,841,601
Africa	166	32	90	47	17	533	4,381,762
Oceania	101	40	116	2	0	259	1,921,798
World Total	20,424	10,812	10,192	2,589	235	46,843	238,049,650

a. No drilling data available for Eastern Europe, USSR, and North Korea.
b. 1989 wells drilled totals and subtotals may not add horizontally due to lack of breakdown in some countries.
c. Includes actual United States well count by American Petroleum Institute (API). Number will increase as additional well completions are reported to API.
Source: *World Oil*, August 1990.

WORLD WELL COMPLETIONS
1990[a]

Area	Oil	Gas	Dry	Service	Suspended	Total Wells[b]	Total Footage
North America	12,456	11,024	8,965	757	21	33,223c	159,823,373
South America	1,680	78	301	35	36	2,130	13,120,103
Far East	5,895	155	100	1,902	27	10,248	58,289,925
Western Europe	316	184	230	86	61	877	7,776,199
Middle East	610	25	113	54	44	959	6,196,382
Africa	247	36	108	43	32	564	4,707,810
Oceania	90	54	134	3	5	286	2,138,808
World Total	21,294	11,556	9,951	2,880	226	48,287	252,052,600

a. No drilling data available for Eastern Europe, USSR, and North Korea.
b. 1990 wells drilled totals and subtotals may not add horizontally due to lack of breakdown in some areas.
c. Includes actual United States well count by American Petroleum Institute (API). Number will increase as additional well completions are reported to API.
Source: *World Oil*, August 1991.

SECTION 4
UNDERGROUND GAS STORAGE

	1990	% Change 90/89
Number of Pools	397	+ 0.5
Est. Ultimate Capacity (Millions of cubic feet)	7,793,683	+ 0.7
Input to Storage (Millions of cubic feet)	2,245,058	+ 7.1
Output from Storage (Millions of cubic feet)	1,749,094	− 27.4
Maximum Day Output (Millions of cubic feet)	44,404	− 4.5

TABLE 4-1
NUMBER OF UNDERGROUND STORAGE POOLS AND ULTIMATE CAPACITY IN THE UNITED STATES, 1970-1990

Year	Number of Pools	Number of States	Est. Ultimate Capacity (Billions of Cubic Feet)
1970	325	26	5,178
1971	333	26	5,575
1972	348	26	6,040
1973	360	26	6,279
1974	367	26	6,360
1975	376	26	6,644
1976	386	26	6,927
1977	385	26	7,223
1978	388	26	7,330
1979	399	26	7,437
1980	401	26	7,488
1981	393	26	7,581
1982	404	26	7,727
1983	419	26	7,755
1984	412	26	7,783
1985	400	26	7,731
1986	396	26	7,792
1987	391	26	7,807
1988	393	27	7,797
1989	395	27	7,737
1990	397	27	7,794

Source: A.G.A. *The Underground Storage of Gas in the United States and Canada*—1990 Update.

TABLE 4-2
NUMBER OF AQUIFER POOLS AND ULTIMATE CAPACITY IN THE UNITED STATES, 1971–1990[a]

Year	Number of Pools	Number of States	Est. Ultimate Capacity (Billions of Cubic Feet)
1971	44	8	1,056
1972	46	9	1,278
1973	49	10	1,399
1974	51	10	1,408
1975	52	10	1,459
1976	52	10	1,484
1977	52	10	1,578
1978	53	10	1,593
1979	56	10	1,601
1980	57	10	1,449
1981	57	10	1,423
1982	56	10	1,432
1983	56	10	1,421
1984	54	10	1,472
1985	52	10	1,401
1986	51	10	1,404
1987	48	10	1,386
1988	47	10	1,397
1989	50	10	1,428
1990	50	10	1,507

a. These data are included in Table 4-1.
Source: Same as Table 4-1.

TABLE 4-3
LIQUEFIED NATURAL GAS STORAGE OPERATIONS IN THE UNITED STATES AS OF DECEMBER 31, 1987[a]

	Presently Operating	Proposed or Pending Operation
Complete Plants		
Storage Capacity—MMcf	63,388	0
Gross Liquefaction Capacity—MMcf/day	309	0
Sendout Capacity—MMcf/day	8,753	0
Number of Facilities	54	0
Satellite Plants		
Storage Capacity—MMcf	6,644	0
Sendout Capacity—MMcf/day	684	0
Number of Facilities	32	0
Import Terminals[b]		
Storage Capacity—MMcf	11,055	0
Sendout Capacity—MMcf/day	1,193	0
Number of Facilities	3	0

a. Not underground storage.
b. Of those presently operating, Algonquin terminal has been utilized for domestic storage since 1973.
Source: Institute of Gas Technology.

UNDERGROUND STORAGE

TABLE 4-4
INPUTS, OUTPUTS, AND GAS IN UNDERGROUND STORAGE, BY STATE, 1990

(Millions of Cubic Feet)

	Year Ending December 31, 1990					
Division and State	Input to Storage	Output from Storage	Native Gas	Stored Gas	Maximum Stored Gas	Maximum Day Output
United States	**2,245,058**	**1,749,094**	**1,148,711**	**5,426,668**	**5,955,035**	**44,403**
New England	**0**	**0**	**0**	**0**	**0**	**0**
Middle Atlantic	**404,974**	**293,379**	**36,600**	**738,460**	**860,851**	**5,942**
New Jersey	0	0	0	0	0	0
New York	64,639	48,143	8,366	141,174	154,897	808
Pennsylvania	340,335	245,236	28,234	597,286	705,954	5,134
East North Central	**779,190**	**611,156**	**364,052**	**1,976,024**	**2,141,702**	**13,128**
Illinois	204,105	181,162	11,298	851,820	904,276	4,132
Indiana	23,038	19,693	19,298	85,238	88,136	419
Michigan	395,281	303,318	251,109	609,921	701,545	5,277
Ohio	156,766	106,983	82,347	429,045	447,745	3,300
Wisconsin	0	0	0	0	0	0
West North Central	**123,294**	**122,945**	**55,167**	**478,142**	**519,356**	**2,998**
Iowa	46,422	54,622	0	247,090	269,743	980
Kansas	63,846	53,069	31,375	137,822	151,242	1,385
Minnesota	1,224	1,555	0	6,483	6,904	56
Missouri	4,407	3,927	0	29,286	29,298	360
Nebraska	7,395	9,772	23,792	57,461	62,169	217
North Dakota	0	0	0	0	0	0
South Dakota	0	0	0	0	0	0
South Atlantic	**157,943**	**96,288**	**65,446**	**470,777**	**480,283**	**2,305**
Delaware	0	0	0	0	0	0
District of Columbia	0	0	0	0	0	0
Florida	0	0	0	0	0	0
Georgia	0	0	0	0	0	0
Maryland	15,004	9,695	32,456	26,082	29,002	298
North Carolina	0	0	0	0	0	0
South Carolina	0	0	0	0	0	0
Virginia	0	0	0	0	0	0
West Virginia	142,939	86,593	32,990	444,695	451,281	2,007
East South Central	**113,541**	**77,765**	**107,879**	**180,295**	**200,404**	**1,840**
Alabama	0	0	0	0	0	0
Kentucky	66,214	45,084	80,556	109,534	123,081	1,000
Mississippi	47,327	32,681	27,323	70,761	77,323	840
Tennessee	0	0	0	0	0	0
West South Central	**416,727**	**312,994**	**197,337**	**932,748**	**1,023,506**	**11,053**
Arkansas	1,949	1,849	22,000	11,130	12,319	59
Louisiana	194,223	118,405	72,011	389,200	411,894	2,489
Oklahoma	95,228	83,075	28,486	292,261	326,122	2,455
Texas	125,327	109,665	74,840	240,157	273,171	6,050
Mountain	**83,387**	**79,805**	**168,574**	**370,519**	**398,958**	**1,823**
Arizona	0	0	0	0	0	0
Colorado	33,149	34,789	37,758	65,410	76,981	949
Idaho	0	0	0	0	0	0
Montana	14,648	21,786	94,370	199,778	208,831	314
Nevada	0	0	0	0	0	0
New Mexico	22,523	13,981	10,600	36,047	39,940	272
Utah	955	1,100	0	3,707	3,793	65
Wyoming	12,112	8,149	25,846	65,577	69,413	223
Pacific	**166,002**	**154,762**	**153,656**	**279,703**	**329,975**	**5,314**
Alaska	0	0	0	0	0	0
California	146,155	134,938	151,764	241,246	288,951	4,773
Hawaii	0	0	0	0	0	0
Oregon	5,893	4,504	1,892	8,190	9,009	74
Washington	13,954	15,320	0	30,267	32,015	467

Source: Same as Table 4-1.

TABLE 4-5
NUMBER OF POOLS, WELLS, COMPRESSOR STATIONS, AND HORSEPOWER IN UNDERGROUND STORAGE FIELDS, BY STATE, 1988–1990

		Number of Pools			Number of Active Wells		
	Division and State	1988	1989	1990	1988	1989	1990
(1)	**United States**	**393**	**395**	**397**	**17,232**	**18,026**	**17,235**
(2)	**New England**	**0**	**0**	**0**	**0**	**0**	**0**
(3)	**Middle Atlantic**	**81**	**84**	**84**	**2,329**	**3,092**	**2,161**
(4)	New Jersey	0	0	0	0	0	0
(5)	New York	21	21	21	1,018	1,018	90
(6)	Pennsylvania	60	63	63	1,311	2,074	2,071
(7)	**East North Central**	**133**	**132**	**132**	**8,792**	**8,798**	**8,847**
(8)	Illinois	30	34	34	1,696	1,695	1,703
(9)	Indiana	28	28	28	924	916	916
(10)	Michigan	53	48	48	2,936	2,945	2,971
(11)	Ohio	22	22	22	3,236	3,242	3,257
(12)	Wisconsin	0	0	0	0	0	0
(13)	**West North Central**	**28**	**28**	**28**	**1,383**	**1,382**	**1,390**
(14)	Iowa	8	8	8	434	435	435
(15)	Kansas	16	16	16	735	733	733
(16)	Minnesota	1	1	1	63	63	63
(17)	Missouri	1	1	1	82	82	82
	Nebraska	2	2	2	69	69	77
	North Dakota	0	0	0	0	0	0
(20)	South Dakota	0	0	0	0	0	0
(21)	**South Atlantic**	**38**	**38**	**38**	**1,656**	**1,658**	**1,661**
(22)	Delaware	0	0	0	0	0	0
(23)	District of Columbia	0	0	0	0	0	0
(24)	Florida	0	0	0	0	0	0
(25)	Georgia	0	0	0	0	0	0
(26)	Maryland	1	1	1	82	82	82
(27)	North Carolina	0	0	0	0	0	0
(28)	South Carolina	0	0	0	0	0	0
(29)	Virginia	0	0	0	0	0	0
(30)	West Virginia	37	37	37	1,574	1,576	1,579
(31)	**East South Central**	**23**	**24**	**25**	**1,059**	**1,054**	**1,088**
(32)	Alabama	0	0	0	0	0	0
(33)	Kentucky	19	20	20	963	957	986
(34)	Mississippi	4	4	5	96	97	102
(35)	Tennessee	0	0	0	0	0	0
(36)	**West South Central**	**45**	**46**	**47**	**936**	**953**	**978**
(37)	Arkansas	4	4	4	12	11	11
(38)	Louisiana	8	8	9	296	305	324
(39)	Oklahoma	12	12	12	297	306	303
(40)	Texas	21	22	22	331	331	340
(41)	**Mountain**	**32**	**30**	**30**	**574**	**576**	**583**
(42)	Arizona	0	0	0	0	0	0
(43)	Colorado	12	12	12	238	238	243
(44)	Idaho	0	0	0	0	0	0
(45)	Montana	5	5	5	238	240	242
(46)	Nevada	0	0	0	0	0	0
(47)	New Mexico	3	3	3	43	43	43
(48)	Utah	2	2	2	19	19	19
(49)	Wyoming	10	8	8	36	36	36
(50)	**Pacific**	**13**	**13**	**13**	**503**	**513**	**527**
(51)	Alaska	0	0	0	0	0	0
(52)	California	9	9	9	426	418	430
(53)	Hawaii	0	0	0	0	0	0
(54)	Oregon	2	2	2	0	18	20
(55)	Washington	2	2	2	77	77	77

Source: Same as Table 4-1.

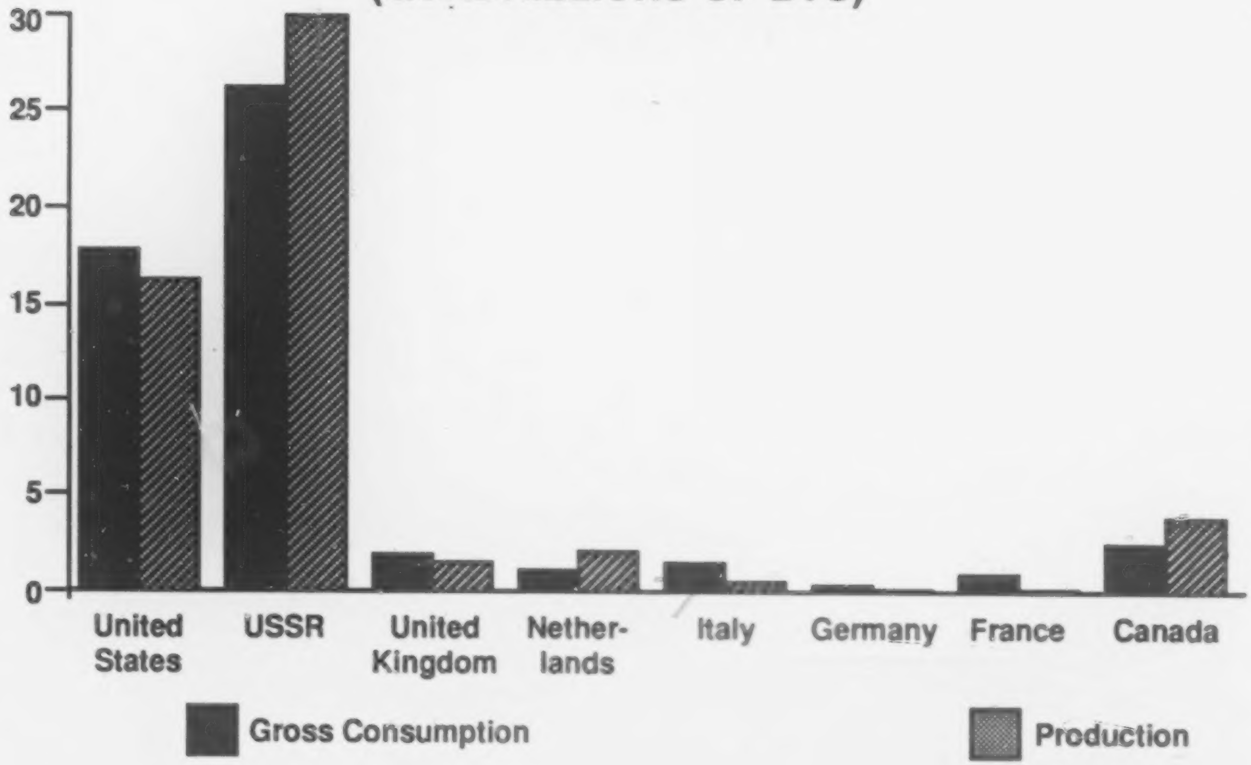
TABLE 4-5 (Continued)
NUMBER OF POOLS, WELLS, COMPRESSOR STATIONS, AND HORSEPOWER IN UNDERGROUND STORAGE FIELDS, BY STATE, 1988–1990

Number of Compressor Stations			Total HP Installed in Compressor Stations			
1988	1989	1990	1988	1989	1990	
295	**312**	**323**	**1,458,639**	**1,462,971**	**1,496,941**	(1)
0	**0**	**0**	**0**	**0**	**0**	(2)
34	**34**	**34**	**86,655**	**87,783**	**85,113**	(3)
0	0	0	0	0	0	(4)
14	14	12	30,960	30,960	30,930	(5)
20	20	22	55,695	56,823	54,183	(6)
116	**120**	**123**	**675,231**	**655,015**	**661,370**	(7)
27	27	27	220,170	199,570	197,960	(8)
13	14	14	18,711	18,745	19,314	(9)
58	61	64	328,860	329,210	336,510	(10)
18	18	18	107,490	107,490	107,586	(11)
0	0	0	0	0	0	(12)
31	**33**	**34**	**69,150**	**69,750**	**96,990**	(13)
2	4	4	14,000	14,000	37,040	(14)
14	14	14	33,210	33,210	33,210	(15)
1	1	1	2,400	3,000	3,000	(16)
1	1	1	8,850	8,850	8,850	(17)
13	13	14	10,690	10,690	14,890	(18)
0	0	0	0	0	0	(19)
0	0	0	0	0	0	(20)
17	**17**	**12**	**65,690**	**64,320**	**62,920**	(21)
0	0	0	0	0	0	(22)
0	0	0	0	0	0	(23)
0	0	0	0	0	0	(24)
0	0	0	0	0	0	(25)
1	1	1	11,000	11,000	11,000	(26)
0	0	0	0	0	0	(27)
0	0	0	0	0	0	(28)
0	0	0	0	0	0	(29)
16	16	11	54,690	53,320	51,920	(30)
12	**17**	**18**	**60,590**	**61,190**	**60,990**	(31)
0	0	0	0	0	0	(32)
10	15	15	36,290	36,290	36,290	(33)
2	2	3	24,300	24,900	24,700	(34)
0	0	0	0	0	0	(35)
41	**42**	**50**	**300,853**	**305,367**	**310,187**	(36)
3	3	3	2,500	2,500	2,500	(37)
6	6	8	115,460	115,460	119,860	(38)
8	8	10	78,150	78,150	78,570	(39)
24	25	29	104,743	109,257	109,257	(40)
32	**37**	**37**	**78,290**	**84,866**	**84,691**	(41)
0	0	0	0	0	0	(42)
9	9	9	30,396	35,428	35,253	(43)
0	0	0	0	0	0	(44)
11	11	11	24,225	24,225	24,225	(45)
0	0	0	0	0	0	(46)
3	5	5	11,180	13,180	13,180	(47)
2	2	2	1,350	1,350	1,350	(48)
7	10	10	11,139	10,683	10,683	(49)
12	**12**	**15**	**122,180**	**134,680**	**134,680**	(50)
0	0	0	0	0	0	(51)
10	10	10	118,580	118,580	118,580	(52)
0	0	0	0	0	0	(53)
1	1	4	3,600	3,600	3,600	(54)
1	1	1	0	12,500	12,500	(55)

CHART 3-3

NATURAL GAS PRODUCTION AND GROSS CONSUMPTION, 1989

(QUADRILLIONS OF BTU)

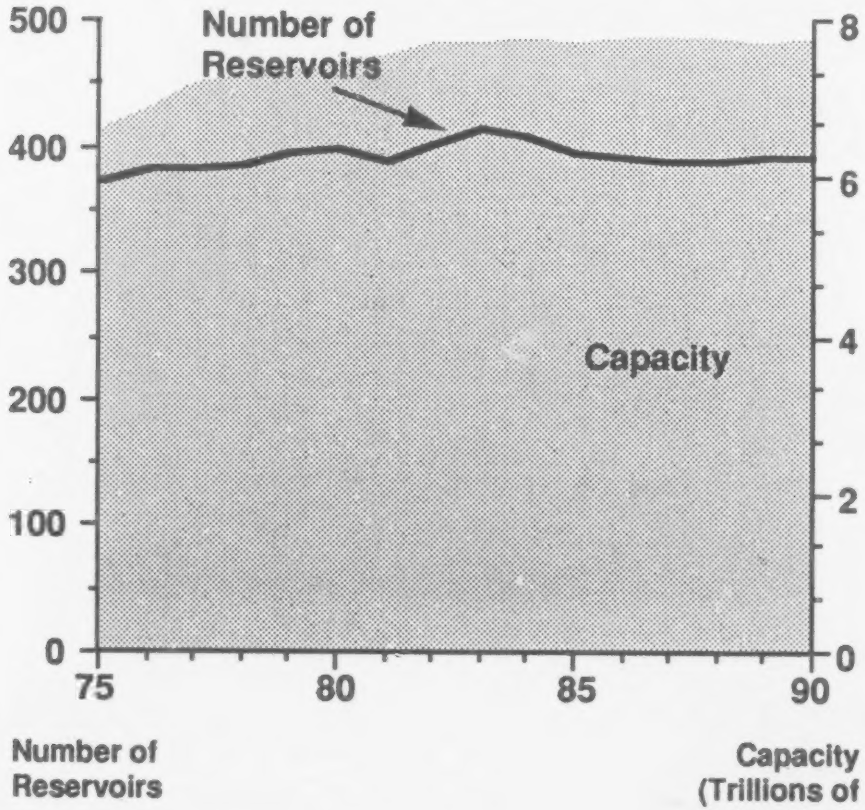


DATA FOR THE GERMAN DEMOCRATIC REPUBLIC AND THE FEDERAL REPUBLIC OF GERMANY WILL BE COMBINED IN 1990.

REFERENCE: TABLE 3-28

CHART 4-1

NUMBER AND CAPACITY OF EXISTING UNDERGROUND STORAGE RESERVOIRS



REFERENCE: TABLE 4-1

TABLE 4-6
ULTIMATE CAPACITY OF EXISTING RESERVOIRS, BY STATE, 1990

(Millions of Cubic Feet)

Division and State	Cushion Gas			Working Gas	Ultimate Reservoir Capacity[a]
	Native	Injected	Total		
United States	**1,129,005**	**2,519,770**	**3,648,776**	**2,926,611**	**7,793,983**
New England	**0**	**0**	**0**	**0**	**0**
Middle Atlantic	**36,600**	**385,071**	**421,672**	**353,388**	**897,998**
New Jersey	0	0	0	0	0
New York	8,366	87,082	95,448	54,092	170,477
Pennsylvania	28,234	297,989	326,224	299,296	727,521
East North Central	**352,391**	**1,037,038**	**1,389,428**	**950,648**	**2,663,749**
Illinois	11,159	549,706	560,865	302,253	948,501
Indiana	19,298	56,768	76,066	28,470	163,333
Michigan	239,587	163,094	402,680	458,350	1,014,395
Ohio	82,347	267,470	349,817	161,575	537,520
Wisconsin	0	0	0	0	0
West North Central	**55,167**	**236,026**	**291,193**	**242,117**	**710,393**
Iowa	0	117,751	117,751	129,339	354,500
Kansas	31,375	98,307	129,682	39,516	197,581
Minnesota	0	4,689	4,689	1,794	20,000
Missouri	0	11,759	11,759	17,527	45,000
Nebraska	23,792	3,520	27,312	53,941	93,312
North Dakota	0	0	0	0	0
South Dakota	0	0	0	0	0
South Atlantic	**65,446**	**272,172**	**337,618**	**198,606**	**561,199**
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Maryland	32,456	14,221	46,677	11,861	64,770
North Carolina	0	0	0	0	0
South Carolina	0	0	0	0	0
Virginia	0	0	0	0	0
West Virginia	32,990	257,951	290,941	186,745	496,429
East South Central	**107,615**	**41,738**	**149,353**	**138,822**	**314,894**
Alabama	0	0	0	0	0
Kentucky	80,292	22,971	103,263	86,827	206,100
Mississippi	27,323	18,767	46,090	51,995	108,794
Tennessee	0	0	0	0	0
West South Central	**189,627**	**363,654**	**553,281**	**576,806**	**1,389,098**
Arkansas	22,000	0	22,000	11,130	38,000
Lousiana	72,011	192,684	264,695	196,516	572,625
Oklahoma	28,486	137,636	166,122	154,626	369,528
Texas	67,130	33,334	100,464	214,534	408,945
Mountain	**168,574**	**70,622**	**239,196**	**299,899**	**706,470**
Arizona	0	0	0	0	0
Colorado	37,758	31,028	68,786	34,382	130,405
Idaho	0	0	0	0	0
Montana	94,370	15,200	109,570	184,578	373,960
Nevada	0	0	0	0	0
New Mexico	10,600	12,828	23,428	23,220	91,353
Utah	0	2,759	2,759	949	5,389
Wyoming	25,846	8,807	34,653	56,770	105,363
Pacific	**153,585**	**113,449**	**267,035**	**166,325**	**550,182**
Alaska	0	0	0	0	0
California	151,693	90,750	242,444	150,567	507,181
Hawaii	0	0	0	0	0
Oregon	1,892	1,399	3,291	6,791	10,901
Washington	0	21,300	21,300	8,967	32,100

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a. In some states or regions, the difference between the sum of the components and Ultimate Reservoir Capacity represents presently unused capacity.

Source: Same as Table 4-1.

SECTION 5
DISTRIBUTION AND TRANSMISSION

	1990	% Change 90/89
Miles of Pipeline		
(Thousands)		
Total	1,206.3	+ 1.2
Field & Gathering	89.5	− 1.2
Transmission	280.1	+ 1.4
Distribution	836.7	+ 2.2
Miles Installed		
(Thousands)	22.9	+ 5.5

DISTRIBUTION AND TRANSMISSION

TABLE 5-1
GAS UTILITY INDUSTRY MILES OF PIPELINE AND MAIN, BY TYPE, 1967-1990[a]

(Thousands)

Year	Total	Field and Gathering	Transmission Pipeline[b]	Distribution Main
1967	828.3	63.7	225.4	539.2
1968	861.6	64.4	234.5	562.7
1969	891.6	64.9	248.1	578.6
1970	913.3	66.3	252.2	594.8
1971	931.4	66.2	254.8	610.4
1972	948.1	66.9	258.1	623.1
1973	962.9	65.9	263.1	633.8
1974	974.1	66.4	262.2	645.6
1975	979.3	68.5	262.6	648.2
1976	987.7	70.3	258.2	659.1
1977	998.9	71.5	260.5	666.9
1978	1,013.0	74.9	260.6	677.5
1979	1,029.8	77.8	263.5	688.5
1980	1,051.8	83.5	266.5	701.8
1981	1,069.8	86.2	269.5	714.1
1982	1,083.4	90.5	271.7	721.2
1983	1,095.1	91.9	273.5	729.7
1984	1,102.4	93.7	271.9	736.8
1985	1,118.9	94.3	271.2	753.4
1986	1,134.1	93.8	271.0	769.3
1987	1,151.2	93.6	273.8	783.8
1988	1,169.0	92.3	275.4	801.3
1989[R]	1,185.0	90.6	276.3	818.4
1990	1,206.3	89.5	280.1	836.7
Steel	947.3	88.5	276.9	581.9
Plastic[c]	206.2	1.0	3.1	202.1
Other	52.8	0.1	0.1	52.6

a. Excludes service pipe. Data not adjusted to common diameter equivalent. Mileage shown as of end of each year.

b. Includes 5.0 thousand miles of Underground Storage pipe in 1975, 5.3 thousand miles in 1976, 5.2 thousand miles in 1977, 6.0 thousand miles in 1978, 5.7 thousand miles in 1979, 6.2 thousand miles in 1980, 7.8 thousand miles in 1981, 5.5 thousand miles in 1982, 5.9 thousand miles in 1983 and 1984, 6.0 thousand miles in 1985, 1986, 1987, and 1988, 6.2 thousand miles in 1989 some of which was formerly included in Field and Gathering pipe.

c. Includes fiberglass.

R–Revised.

TABLE 5-2
GAS UTILITY INDUSTRY MILES OF PIPELINE AND MAIN, BY STATE, 1975-1990[a]

Division and State	1975	1980	1985	1987	1988	1989[R]	1990
United States	**979,263**	**1,051,774**	**1,118,875**	**1,151,172**	**1,168,988**	**1,185,325**	**1,206,274**
New England	**26,580**	**27,794**	**28,476**	**29,218**	**29,860**	**30,426**	**30,759**
Connecticut	5,991	6,710	6,550	6,658	6,814	6,911	6,983
Maine	461	395	411	376	433	443	447
Massachusetts	16,452	16,719	17,359	17,784	18,127	18,340	18,512
New Hampshire	1,093	1,163	1,283	1,417	1,419	1,615	1,650
Rhode Island	2,248	2,403	2,463	2,543	2,610	2,639	2,664
Vermont	335	404	410	440	457	478	494
Middle Atlantic	**113,993**	**116,439**	**121,682**	**123,837**	**125,232**	**126,891**	**128,447**
New Jersey	22,077	22,838	24,598	25,868	26,563	27,234	27,818
New York	40,535	41,394	42,334	43,104	43,497	44,090	44,549
Pennsylvania	51,381	52,207	54,750	54,865	55,172	55,567	56,080
East North Central	**190,172**	**200,361**	**206,889**	**211,702**	**214,612**	**217,991**	**221,547**
Illinois	50,252	53,375	54,541	55,381	56,061	56,725	57,296
Indiana	27,267	28,227	30,608	32,179	32,757	33,426	34,141
Michigan	40,203	44,100	44,694	45,516	46,044	46,681	47,583
Ohio	51,505	52,667	54,110	55,032	55,752	56,399	57,239
Wisconsin	20,945	21,992	22,936	23,594	23,998	24,760	25,288
West North Central	**106,134**	**112,901**	**115,855**	**119,385**	**120,718**	**122,028**	**124,212**
Iowa	17,273	17,892	18,254	18,473	18,675	18,684	19,023
Kansas	34,280	36,893	37,093	38,297	38,274	38,550	39,323
Minnesota	15,264	16,720	18,259	19,479	20,050	20,554	21,384
Missouri	20,897	21,854	21,875	22,545	23,035	23,432	23,504
Nebraska	13,333	14,079	14,381	14,456	14,498	14,576	14,679
North Dakota	2,533	2,854	3,208	3,253	3,269	3,286	3,312
South Dakota	2,554	2,609	2,785	2,882	2,914	2,946	2,987
South Atlantic	**100,496**	**103,960**	**112,722**	**117,374**	**120,545**	**123,600**	**127,292**
Delaware	1,322	1,336	1,428	1,496	1,631	1,726	1,665
District of Columbia	1,163	1,157	1,161	1,165	1,169	1,175	1,181
Florida	13,100	12,902	14,974	15,501	15,764	16,011	16,345
Georgia	22,679	24,676	27,190	28,823	30,153	31,402	32,062
Maryland	8,534	8,704	8,888	9,065	9,307	9,410	9,596
North Carolina	11,100	11,842	13,298	14,020	14,921	15,475	16,273
South Carolina	9,667	9,825	11,092	11,521	11,949	12,325	12,818
Virginia	10,944	11,226	12,315	13,606	13,986	14,157	14,788
West Virginia	21,987	22,292	22,376	22,177	21,665	21,919	22,564
East South Central	**70,345**	**73,807**	**78,485**	**81,038**	**83,337**	**85,254**	**87,244**
Alabama	17,832	19,556	20,779	21,438	22,010	22,109	22,877
Kentucky	19,816	19,981	20,991	21,238	21,626	21,866	22,125
Mississippi	17,056	17,911	18,666	18,926	19,055	19,183	19,308
Tennessee	15,641	16,359	18,049	19,436	20,646	22,096	22,934
West South Central	**194,820**	**216,394**	**237,776**	**246,590**	**248,884**	**249,484**	**250,712**
Arkansas	17,474	18,312	20,390	20,657	21,162	21,939	22,459
Louisiana	38,855	41,689	44,784	47,599	48,184	48,525	48,314
Oklahoma	32,798	37,132	42,594	42,452	42,682	42,593	42,922
Texas	105,693	119,261	130,008	135,882	136,856	136,427	137,017
Mountain	**83,184**	**97,391**	**107,410**	**108,904**	**109,963**	**111,549**	**115,288**
Arizona	15,197	16,669	17,341	17,773	17,923	18,085	18,359
Colorado	19,192	23,108	26,837	26,381	26,598	26,925	29,299
Idaho	3,785	4,177	4,589	4,665	4,708	4,769	4,923
Montana	7,435	8,822	8,965	9,232	9,320	9,465	9,601
Nevada	2,945	3,554	3,933	4,219	4,391	4,596	4,943
New Mexico	21,657	24,581	26,684	26,359	26,455	26,751	27,294
Utah	6,577	7,846	9,050	10,144	10,360	10,670	10,726
Wyoming	6,396	8,634	10,011	10,131	10,208	10,288	10,143
Pacific	**93,539**	**102,727**	**109,580**	**113,124**	**115,840**	**118,102**	**120,782**
Alaska	868	1,186	1,511	1,917	1,988	2,053	2,108
California	72,493	79,625	84,688	87,006	89,190	90,744	92,693
Hawaii	581	587	590	604	608	612	617
Oregon	8,838	9,709	10,390	10,670	10,788	11,044	11,269
Washington	10,759	11,620	12,401	12,927	13,266	13,649	14,095

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[a] Includes field and gathering, underground storage, transmission and distribution main but excludes service pipe. Data not adjusted to common diameter equivalent. Mileage shown as of end of year.

R–Revised.

TABLE 5-3
GAS UTILITY INDUSTRY MILES OF PIPELINE AND MAIN, BY STATE AND TYPE OF MAIN, 1990[a]

Division and State	Total	Field and Gathering	Transmission Pipeline[b]	Distribution Main
United States	**1,206,274**	**89,499**	**280,108**	**836,667**
New England	**30,750**	**0**	**1,767**	**28,983**
Connecticut	6,983	0	942	17,570
Maine	447	0	492	6,491
Massachusetts	18,512	0	77	370
New Hampshire	1,650	0	139	1,511
Rhode Island	2,664	0	60	2,604
Vermont	494	0	57	437
Middle Atlantic	**128,447**	**6,671**	**18,396**	**103,380**
New Jersey	27,818	0	1,626	26,192
New York	44,549	561	3,836	40,152
Pennsylvania	56,080	6,110	12,934	37,036
East North Central	**221,547**	**4,312**	**38,036**	**179,199**
Illinois	57,296	0	11,960	45,336
Indiana	34,141	143	5,836	28,162
Michigan	47,583	185	7,199	40,199
Ohio	57,239	3,984	9,717	43,538
Wisconsin	25,288	0	3,324	21,964
West North Central	**124,212**	**9,089**	**39,243**	**75,880**
Iowa	19,023	0	6,017	13,006
Kansas	39,323	8,994	15,039	15,290
Minnesota	21,384	0	4,373	17,011
Missouri	23,504	25	4,009	19,470
Nebraska	14,679	46	7,505	7,128
North Dakota	3,312	10	1,329	1,973
South Dakota	2,987	14	971	2,002
South Atlantic	**127,292**	**8,516**	**22,021**	**96,755**
Delaware	1,665	0	308	1,357
District of Columbia	1,181	0	24	1,157
Florida	16,345	0	2,921	13,424
Georgia	32,062	0	5,275	26,787
Maryland	9,596	23	874	8,699
North Carolina	16,273	0	2,460	13,813
South Carolina	12,818	0	2,413	10,405
Virginia	14,788	132	2,548	12,108
West Virginia	22,564	8,361	5,198	9,005
East South Central	**87,244**	**3,949**	**26,592**	**56,703**
Alabama	22,877	7	5,315	17,555
Kentucky	22,125	3,725	6,932	11,468
Mississippi	19,308	217	9,484	9,607
Tennessee	22,934	0	4,861	18,073
West South Central	**250,712**	**34,869**	**93,544**	**122,299**
Arkansas	22,459	1,342	7,100	14,017
Louisiana	48,314	2,360	26,850	19,104
Oklahoma	42,922	11,306	13,289	18,327
Texas	137,017	19,861	46,305	70,851
Mountain	**115,288**	**21,065**	**28,941**	**65,282**
Arizona	18,359	2	5,126	13,231
Colorado	29,299	4,057	5,814	19,428
Idaho	4,923	0	1,535	3,388
Montana	9,601	2,160	3,449	3,992
Nevada	4,943	8	1,139	3,796
New Mexico	27,294	10,898	6,926	9,470
Utah	10,726	809	1,151	8,766
Wyoming	10,143	3,131	3,801	3,211
Pacific	**120,782**	**1,028**	**11,568**	**108,186**
Alaska	2,108	0	339	1,769
California	92,693	1,028	7,871	83,794
Hawaii	617	0	0	617
Oregon	11,269	0	1,373	9,896
Washington	14,095	0	1,985	12,110

a. Excludes 474,038 miles of service pipe. Data not adjusted to common diameter equivalent. Mileage shown as of end of year.
b. Includes 6,232 miles of underground storage pipe.

TABLE 5-4

GAS UTILITY INDUSTRY MILES OF PIPELINE AND MAIN INSTALLED DURING 1990, BY STATE AND BY TYPE OF PIPE[a]

		Field and Gathering	Transmission Pipeline	Distribution Main			
Division and State	Total[b]	Steel	Steel[c]	Total	Steel	Plastic[d]	Other
United States	**22,949**	**311**	**2,106**	**20,512**	**4,138**	**16,367**	**7**
New England	**514**	**0**	**4**	**510**	**87**	**420**	**3**
Connecticut	96	0	3	93	19	71	3
Maine	8	0	0	8	0	8	0
Massachusetts	298	0	0	298	30	268	0
New Hampshire	58	0	0	58	28	30	0
Rhode Island	36	0	1	35	6	29	0
Vermont	18	0	0	18	4	14	0
Middle Atlantic	**2,206**	**8**	**128**	**2,070**	**364**	**1,704**	**2**
New Jersey	754	0	35	719	141	578	0
New York	621	3	13	605	50	555	0
Pennsylvania	831	5	80	746	173	571	2
East North Central	**4,452**	**1**	**468**	**3,983**	**1,358**	**2,624**	**1**
Illinois	1,045	0	88	957	625	332	0
Indiana	881	0	145	736	43	693	0
Michigan	1,025	1	131	893	46	847	0
Ohio	869	0	72	797	598	199	0
Wisconsin	632	0	32	600	46	553	1
West North Central	**2,225**	**75**	**158**	**1,992**	**173**	**1,819**	**0**
Iowa	413	0	23	390	31	359	0
Kansas	355	75	28	252	40	212	0
Minnesota	904	0	63	841	36	805	0
Missouri	340	0	22	318	36	282	0
Nebraska	129	0	15	114	21	93	0
North Dakota	32	0	1	31	0	31	0
South Dakota	52	0	6	46	9	37	0
South Atlantic	**3,112**	**46**	**143**	**2,923**	**1,146**	**1,777**	**0**
Delaware	13	0	6	7	0	7	0
District of Columbia	15	0	0	15	1	14	0
Florida	278	0	4	274	89	185	0
Georgia	622	0	25	597	548	49	0
Maryland	202	0	8	194	43	151	0
North Carolina	807	0	50	757	108	649	0
South Carolina	320	0	17	303	32	271	0
Virginia	671	0	14	657	320	337	0
West Virginia	184	46	19	119	5	114	0
East South Central	**1,855**	**11**	**155**	**1,689**	**426**	**1,262**	**1**
Alabama	306	0	57	249	42	207	0
Kentucky	343	11	49	283	172	111	0
Mississippi	188	0	18	170	24	145	1
Tennessee	1,018	0	31	987	188	799	0
West South Central	**3,225**	**152**	**844**	**2,229**	**121**	**2,108**	**0**
Arkansas	596	16	139	441	12	429	0
Louisiana	263	1	135	127	20	107	0
Oklahoma	649	74	268	307	1	306	0
Texas	1,717	61	302	1,354	88	1,266	0
Mountain	**2,184**	**38**	**127**	**2,019**	**119**	**1,900**	**0**
Arizona	387	0	0	387	25	362	0
Colorado	666	11	69	586	29	557	0
Idaho	121	0	0	121	12	109	0
Montana	211	24	1	186	2	184	0
Nevada	375	0	9	366	31	335	0
New Mexico	188	3	22	163	0	163	0
Utah	192	0	3	189	18	171	0
Wyoming	44	0	23	21	2	19	0
Pacific	**3,176**	**0**	**79**	**3,097**	**344**	**2,753**	**0**
Alaska	56	0	1	55	0	55	0
California	2,364	0	78	2,286	244	2,042	0
Hawaii	5	0	0	5	4	1	0
Oregon	276	0	0	276	42	234	0
Washington	475	0	0	475	54	421	0

a. Excludes service pipe. Data not adjusted to common diameter equivalent.
b. Does not include 119 miles of plastic and other pipe classified as field and gathering and transmission pipe.
c. Includes 17 miles of underground storage pipe.
d. Includes fiberglass.

TABLE 5–5
GAS UTILITY INDUSTRY REQUIREMENTS OF STEEL PIPE FOR NEW CONSTRUCTION AND MAINTENANCE AND REPAIR BY SIZE OF PIPE, 1990

(Miles)

Size of Pipe	Total	New Construction	Maintenance Repair
Normal Pipe Size—Inches			
¾ and less	850.4	739.2	111.2
1	242.7	208.5	34.2
1¼	299.6	273.4	26.2
1½	104.2	99.7	4.5
Outside Diameter—Inches			
2⅜	2,332.3	1,881.5	450.8
3½	247.6	206.3	41.3
4½	1,423.3	1,209.6	213.7
6⅝	913.2	747.7	165.5
8¾	549.4	457.8	91.6
10¾	302.9	270.8	32.1
12¾	492.5	434.6	57.9
14	0.8	0.5	0.3
16	86.4	78.7	7.7
18	20.8	16.4	4.4
20	454.3	447.1	7.2
22	2.4	2.4	0.0
24	22.2	20.5	1.7
26	10.5	9.4	1.1
30	109.5	108.1	1.4
34	0.0	0.0	0.0
36	89.7	89.7	0.0
42	170.3	170.3	0.0
Other Sizes	16.4	14.8	1.6
Total	**8,741.4**	**7,487.0**	**1,254.4**

TABLE 5–6
GAS UTILITY INDUSTRY INSTALLED COMPRESSOR HORSEPOWER, 1967–1990

(Thousands)

Year	Total	Transmission
1967	10,746	8,596
1968	11,438	9,146
1969	12,742	9,375
1970	13,150	9,692
1971	14,142	10,763
1972	14,506	10,976
1973	14,858	11,272
1974	15,181	11,883[a]
1975	15,413	12,069
1976	15,472	12,046
1977	15,553	12,105
1978	15,824	12,255
1979	16,030	12,437
1980	16,375	13,091
1981	16,601	13,270
1982	16,965	13,460
1983	16,900	13,426
1984	16,880	13,368
1985	16,567	13,131
1986	16,447	13,167
1987	16,356	13,650
1988	16,814	14,104
1989R	16,688	13,871
1990	16,489	13,738

a. Not comparable to previous years due to reclassification.
R–Revised.

TABLE 5–7
SELECTED STATISTICS FOR MAJOR TRANSMISSION COMPANIES, 1990

Name of Transmission System	No. of Transmission Compressor Stations	Total Miles of Transmission Pipeline	Peak Day Sendout (MMCF)	Operating Revenues ($000,000)
Algonquin Gas Transmission Co.	5	994	1,165	$ 467.2
ANR Pipeline Co.	46	9,714	1,504	1,032.8
Colorado Interstate Gas Co.	27	3,047	985	429.5
Columbia Gas Transmission Co.	117	11,125	5,644	750.4
Columbia Gulf Transmission Co.	13	4,286	1,996	144.6
Consolidated Gas Transmission Corp.	66	3,793	2,196	1,066.7
East Tennessee Natural Gas Co.	17	1,121	543	244.8
El Paso Natural Gas Co.	65	10,589	552	1,221.5
Enron-Northern Natural	60	16,255	4,140	1,152.3
Florida Gas Transmission Co.	20	4,427	922	587.9
Midwestern Gas Transmission Co.	7	354	665	163.2
Mississippi River Transmission Co.	15	2,018	1,383	317.7
Natural Gas Pipeline Co. of America	62	10,931	2,935	1,556.0
Pacific Gas Transmission Co.	13	799	1,164	913.1
Panhandle Eastern Pipeline Co.	68	6,622	687	597.9
South Georgia Natural Gas Co.	2	767	a	26.3
Southern Natural Gas Co.	38	7,638	1,605	690.2
Tenneco, Inc.	70	14,094	7,523	1,265.7
Texas Eastern Transmission Co.	67	9,847	4,841	1,571.8
Texas Gas Transmission Corp.	23	5,861	3,039	668.9
Transcontinental Gas Pipeline Corp.	40	10,583	7,295	1,260.5
Transwestern Pipeline Co.	76	4,482	930	282.0
Trunkline Gas Co.	20	4,198	279	479.7
United Gas Pipeline Co.	39	7,350	210	496.1
Williams Natural Gas Co.	37	5,858	a	371.9

a. Not available.

Source: Federal Energy Regulatory Commission, FERC Form No. 2: Annual Report of Natural Gas Companies (Class A and Class B), 1990.

SECTION 6
SALES—QUANTITIES

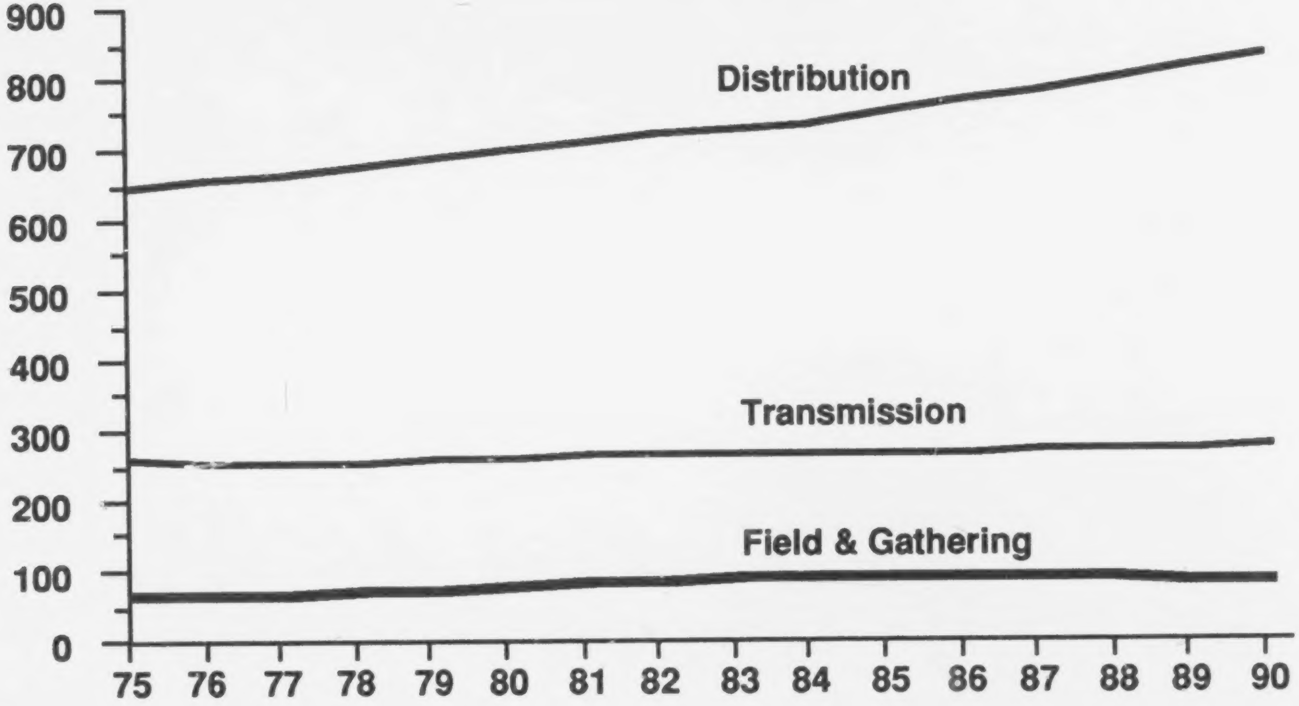
	1990	% Change 90/89
Gas Utility Industry		
(Trillions of Btu)		
Total Sales	9,846.3	− 6.7
Residential	4,471.4	− 6.8
Commercial	2,193.4	− 5.5
Industrial	3,010.5	− 7.2
Industrial Only	1,890.4	− 3.7
Electric Generation	1,120.1	−12.5
Other	171.1	− 8.9
Transportation Volumes	4,308.6	
Total Deliveries	14,154.9	
Resale	3,982.6	−20.6

NOTE: Part of the decline in Gas Utility Sales are due to the continued increase of activity in spot market sales and the resulting transportation of gas to end-users. For volumes of gas transported to end-users (and therefore not sold by gas utilities) see Table 3-15 and Table 6-4.

CHART 5-1

GAS UTILITY INDUSTRY MILES OF PIPELINE AND MAIN

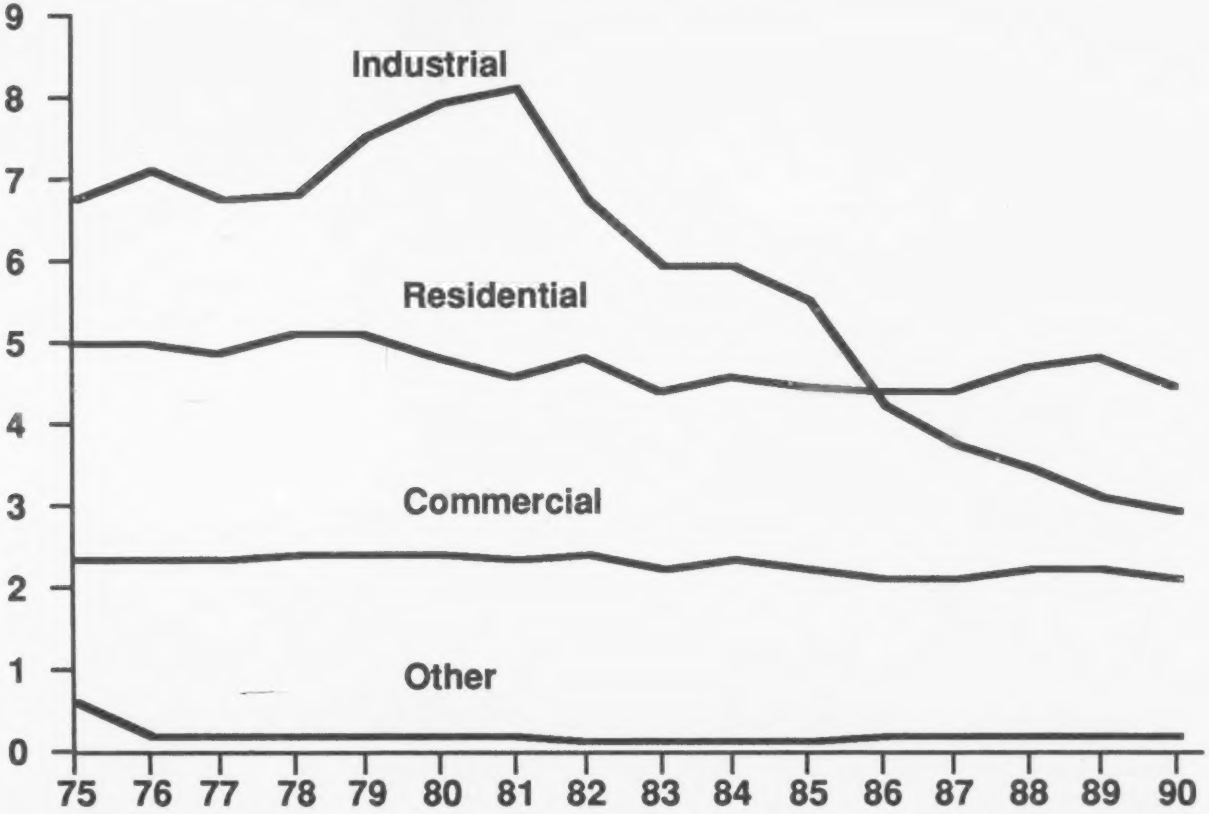
(THOUSANDS OF MILES)



REFERENCE: TABLE 5-1

CHART 6-1

GAS UTILITY SALES BY CLASS OF SERVICE
(QUADRILLIONS OF BTU)



REFERENCE: TABLE 6-1

SALES—QUANTITIES

TABLE 6-1
GAS UTILITY INDUSTRY SALES, BY CLASS OF SERVICE
1967-1990

(Trillions of Btu)

Year	Total	Residential	Commercial	Industrial[a]	Other[a]
1967	13,488.3	4,365.3	1,577.6	7,014.3	531.1
1968	14,472.4	4,552.7	1,704.9	7,595.1	619.7
1969	15,391.6	4,820.4	1,878.1	8,135.8	557.3
1970	16,043.5	4,923.7	2,006.6	8,439.2	674.0
1971	16,685.7	5,040.1	2,155.5	8,645.5	844.7
1972	17,082.1	5,141.8	2,275.7	8,775.7	888.8
1973	16,479.9	4,993.6	2,280.8	8,370.8	834.7
1974	16,000.3	4,864.8	2,293.4	8,153.2	689.0
1975	14,862.9	4,991.0	2,386.8	6,837.1	648.0
1976	14,813.5	5,014.2	2,422.6	7,192.0	184.6
1977	14,340.9	4,946.3	2,409.4	6,796.4	188.9
1978	14,748.4	5,106.7	2,499.5	6,931.5	210.7
1979	15,440.3	5,083.1	2,485.8	7,641.4	230.0
1980	15,413.2	4,826.1	2,453.4	7,965.9	167.7
1981	15,374.8	4,609.7	2,375.4	8,239.3	150.4
1982	14,182.7	4,769.8	2,471.3	6,794.3	147.3
1983	12,857.5	4,449.6	2,298.2	5,969.4	140.2
1984	13,161.7	4,628.3	2,396.0	5,991.0	146.4
1985	12,615.2	4,513.0	2,338.0	5,634.7	129.5
1986	11,125.1	4,380.8	2,238.9	4,338.2	167.2
1987	10,543.4	4,385.0	2,155.9	3,847.9	154.6
1988	10,705.3	4,695.0	2,306.0	3,544.1	160.2
1989R	10,551.1	4,798.0	2,321.8	3,243.4	187.9
1990	9,846.3	4,471.4	2,193.4	3,010.5	171.1

a. Prior to 1976, "Other" electric generation (see Table 6-13) is included in the "Other" class of service. For 1976 and beyond all electric generation is included in the Industrial category.

R–Revised.

TABLE 6-2
GAS UTILITY INDUSTRY SALES, BY CLASS OF SERVICE AND TYPE OF COMPANY
1984-1990[a]

(Trillions of Btu)

	1984	1985	1986	1987	1988	1989R	1990
Distribution							
Total	**3,078**	**3,803**	**3,439**	**3,251**	**3,278**	**3,531**	**3,335**
Residential	1,358	1,696	1,632	1,621	1,748	1,826	1,762
Commercial	780	948	906	871	890	885	844
Industrial	919	1,131	874	732	614	795	702
Other	21	28	27	27	26	25	27
Transmission							
Total	**1,711**	**1,708**	**1,496**	**1,408**	**1,264**	**1,098**	**1,020**
Residential	1	1	1	1	2	2	1
Commercial	4	3	5	3	12	6	4
Industrial	1,687	1,689	1,437	1,375	1,220	1,086	1,010
Other	20	15	53	29	30	4	4
Integrated							
Total	**4,290**	**2,922**	**2,396**	**2,209**	**2,273**	**2,017**	**1,816**
Residential	1,626	1,086	1,025	1,052	1,103	1,064	948
Commercial	782	522	469	454	494	485	443
Industrial	1,841	1,294	873	665	631	369	338
Other	41	20	29	38	45	99	87
Combination							
Total	**3,419**	**3,578**	**3,234**	**3,102**	**3,285**	**3,298**	**3,095**
Residential	1,358	1,464	1,458	1,445	1,563	1,624	1,498
Commercial	690	728	724	690	769	802	763
Industrial	1,331	1,339	1,009	925	912	829	795
Other	39	47	43	42	41	43	39
Municipals							
Total	**664**	**605**	**561**	**573**	**605**	**608**	**580**
Residential	286	266	264	265	280	282	262
Commercial	141	137	136	138	140	144	138
Industrial	213	182	145	152	168	165	165
Other	25	20	16	18	17	17	15

a. All electric generation is included in the Industrial category.

R–Revised.

Note: This table depicts total sales as shown on Table 6-1, by company type. Also, data by company type not directly comparable from year to year due to acquisitions and mergers. See page ix.

SALES—QUANTITIES

TABLE 6-3
GAS UTILITY INDUSTRY SALES, BY QUARTER AND CLASS OF SERVICE
1975-1990

(Trillions of Btu)

Year and Quarter	Total	Residential	Commercial	Industrial[a]	Other[a]
1975					
First	4,931.5	2,192.8	970.4	1,598.7	169.6
Second	3,520.9	1,137.7	536.3	1,715.9	131.0
Third	2,794.9	474.9	301.2	1,842.2	176.6
Fourth	3,615.6	1,185.6	579.0	1,680.2	170.8
1980					
First	5,434.3	2,218.9	1,031.1	2,121.8	62.5
Second	3,258.5	914.7	464.5	1,845.7	33.6
Third	2,753.3	405.3	300.1	2,021.5	26.4
Fourth	3,967.1	1,287.3	657.7	1,974.9	47.2
1982					
First	5,350.7	2,318.2	1,086.6	1,888.2	57.7
Second	3,020.3	880.9	465.1	1,645.6	28.7
Third	2,416.1	404.4	297.2	1,692.4	22.1
Fourth	3,395.6	1,166.3	622.4	1,568.1	38.8
1983					
First	4,439.2	1,917.5	921.9	1,547.0	52.8
Second	2,835.9	935.1	477.3	1,393.3	30.2
Third	2,220.5	382.2	277.4	1,540.6	20.3
Fourth	3,361.9	1,214.9	621.6	1,488.5	36.9
1984					
First	4,918.2	2,199.7	1,050.1	1,608.3	60.1
Second	2,821.1	882.5	464.2	1,446.0	28.4
Third	2,182.9	383.7	276.5	1,504.2	18.5
Fourth	3,239.5	1,162.4	605.2	1,432.5	39.4
1985					
First	4,761.7	2,161.7	1,030.7	1,515.3	54.0
Second	2,441.2	740.5	399.9	1,277.0	23.8
Third	2,081.9	381.9	269.2	1,413.9	16.9
Fourth	3,330.4	1,228.9	638.2	1,428.5	34.8
1986					
First	4,306.9	2,038.9	973.3	1,240.9	53.8
Second	2,203.9	729.9	384.5	1,050.5	39.0
Third	1,714.2	384.1	260.0	1,041.2	28.9
Fourth	2,900.1	1,227.9	621.1	1,005.6	45.5
1987					
First	3,971.2	2,010.9	919.1	986.8	54.4
Second	2,076.8	749.8	380.3	918.0	28.7
Third	1,636.6	377.2	249.9	983.0	26.5
Fourth	2,858.8	1,247.1	606.6	960.1	45.0
1988					
First	4,273.9	2,226.1	1,016.0	968.8	63.0
Second	1,950.2	774.6	398.7	749.0	27.9
Third	1,676.2	374.7	256.4	1,026.6	18.5
Fourth	2,805.0	1,319.6	634.9	799.7	50.8
1989[R]					
First	4,042.9	2,141.6	961.8	881.5	58.0
Second	1,930.9	793.2	411.8	690.7	35.2
Third	1,498.5	392.4	257.2	814.4	34.5
Fourth	3,078.8	1,470.8	691.0	856.8	60.2
1990					
First	3,662.8	1,973.4	898.5	730.6	60.3
Second	1,907.7	796.7	409.8	667.2	34.0
Third	1,500.0	383.5	256.8	832.1	27.6
Fourth	2,775.8	1,317.8	628.2	780.6	49.2

a. Prior to 1976, "Other" electric generation (see Table 6-13) is included in the "Other" class of service. For 1976 and beyond all electric generation is included in the Industrial category.
R–Revised.

TABLE 6-4
GAS UTILITY INDUSTRY TOTAL SALES AND TRANSPORTATION VOLUMES, BY MONTH, 1971-1990

(Trillions of Btu)

Year	January	February	March	April	May	June	July	August	September	October	November	December	Total
1971	1,886.8	1,873.5	1,769.5	1,559.1	1,312.2	1,145.2	1,053.3	1,037.4	1,023.7	1,100.9	1,305.7	1,618.4	16,685.7
1972	1,833.1	1,908.1	1,758.3	1,542.6	1,292.5	1,176.1	1,056.1	1,125.9	1,094.5	1,120.0	1,378.7	1,796.2	17,082.1
1973	1,909.4	1,752.8	1,645.3	1,500.1	1,332.1	1,143.8	1,104.8	1,069.0	1,063.1	1,136.5	1,306.7	1,516.3	16,479.9
1974	1,847.6	1,707.2	1,630.7	1,493.6	1,251.6	1,119.9	1,050.8	1,034.9	992.3	1,115.2	1,219.8	1,536.7	16,000.3
1975	1,709.5	1,633.6	1,588.4	1,455.3	1,120.8	944.8	924.7	934.8	935.4	1,009.2	1,102.8	1,503.6	14,862.9
1976	1,797.5	1,644.6	1,451.0	1,252.2	1,099.8	965.6	913.1	900.8	899.1	996.4	1,278.3	1,614.7	14,813.5
1977	1,901.9	1,682.7	1,425.7	1,168.4	974.8	904.5	875.8	866.5	860.7	976.7	1,153.5	1,549.8	14,340.9
1978	1,808.7	1,834.1	1,647.5	1,237.7	1,061.4	921.4	895.1	878.8	839.6	947.7	1,151.1	1,525.5	14,748.4
1979	1,925.1	1,923.8	1,630.5	1,356.3	1,074.6	934.9	903.7	920.9	891.3	1,038.9	1,253.4	1,587.0	15,440.4
1980	1,834.6	1,871.4	1,728.3	1,315.2	1,024.3	919.0	928.2	918.9	906.2	1,024.5	1,287.0	1,655.6	15,413.2
1981	1,957.1	1,759.8	1,595.3	1,274.3	1,107.4	1,003.2	957.9	933.2	901.8	1,044.8	1,235.1	1,604.9	15,374.8
1982	1,964.4	1,831.3	1,555.0	1,288.9	911.8	819.6	816.7	823.6	775.8	864.7	1,117.5	1,413.4	14,182.7
1983	1,619.9	1,513.6	1,305.7	1,189.1	906.1	740.7	728.5	762.7	729.3	809.6	1,029.7	1,522.6	12,857.5
1984	1,907.9	1,532.8	1,477.5	1,172.3	912.8	736.0	739.9	736.2	706.8	812.5	1,054.5	1,372.5	13,161.7
1985	1,705.5	1,729.3	1,326.9	1,013.5	736.4	691.3	699.9	716.0	666.0	784.5	1,001.6	1,544.3	12,615.2
1986	1,649.9	1,428.7	1,228.3	892.5	709.4	602.0	574.2	568.4	571.6	663.4	926.2	1,310.5	11,125.1
1987	1,499.2	1,316.5	1,155.5	926.0	630.5	520.3	531.6	586.2	518.8	704.2	878.4	1,276.2	10,543.4
1988	1,633.2	1,462.6	1,178.1	830.0	606.5	513.7	543.4	604.8	528.0	671.3	889.7	1,244.0	10,705.3
1989	1,361.0	1,416.3	1,265.7	851.3	604.8	474.6	507.3	519.8	471.4	694.9	901.3	1,482.7	10,551.1
1990[a]													
Sales	1,438.3	1,168.2	1,056.3	825.1	599.2	483.4	478.3	523.5	498.2	635.6	835.0	1,305.2	9,846.3
Transportation Volumes	331.1	310.0	334.9	360.7	355.5	381.4	364.9	374.9	373.8	393.3	366.1	361.9	4,308.6

[a] 1990 is the first year Transportation Volumes are reported.

TABLE 6-5
GAS UTILITY INDUSTRY SALES, BY STATE, 1975-1990[a]

(Trillions of Btu)

Division and State	1975	1980	1985	1987	1988	1989	1990
United States	**14,862.9**	**15,413.2**	**12,615.2**	**10,543.4**	**10,705.3**	**10,551.1**	**9,846.3**
New England	**243.5**	**298.2**	**348.5**	**369.9**	**358.8**	**400.1**	**388.6**
Connecticut	61.0	73.4	78.6	86.8	87.9	89.0	91.4
Maine	2.0	2.2	2.6	2.7	3.2	3.7	4.3
Massachusetts	145.9	182.5	220.9	230.6	217.6	255.7	238.5
New Hampshire	7.8	9.5	10.6	11.9	13.0	15.4	16.0
Rhode Island	23.4	26.4	30.6	32.4	31.2	29.8	31.4
Vermont	3.4	4.1	5.2	5.4	5.8	6.5	7.0
Middle Atlantic	**1,495.1**	**1,658.2**	**1,499.9**	**1,392.6**	**1,431.0**	**1,422.2**	**1,334.8**
New Jersey	257.9	322.7	334.8	351.9	364.5	381.7	354.4
New York	581.9	600.8	639.1	568.1	575.5	574.1	570.6
Pennsylvania	655.4	734.7	526.0	472.6	491.0	466.4	409.8
East North Central	**3,749.5**	**3,658.1**	**2,897.2**	**2,164.3**	**2,314.7**	**2,327.9**	**2,084.5**
Illinois	1,112.4	1,100.3	900.9	696.0	727.8	708.6	620.7
Indiana	458.8	475.9	399.0	267.0	276.5	277.8	262.1
Michigan	885.8	850.0	667.6	476.0	518.7	536.0	480.6
Ohio	929.8	888.0	624.7	521.2	561.0	563.0	491.5
Wisconsin	362.7	343.9	305.0	204.1	230.7	242.5	229.6
West North Central	**1,592.4**	**1,412.3**	**1,144.0**	**896.2**	**943.8**	**914.2**	**832.2**
Iowa	298.8	255.8	216.9	160.1	167.5	168.0	149.2
Kansas	410.4	364.6	248.7	168.5	162.4	141.2	134.0
Minnesota	295.0	267.1	250.8	216.3	237.6	243.6	224.1
Missouri	344.5	326.8	256.2	222.4	230.6	219.6	195.2
Nebraska	187.2	152.5	124.0	91.2	102.2	98.4	90.4
North Dakota	24.7	21.6	22.6	18.2	20.9	20.4	18.3
South Dakota	31.8	23.9	24.8	19.6	22.5	23.0	21.0
South Atlantic	**1,106.1**	**1,255.7**	**1,095.0**	**1,101.5**	**1,071.6**	**1,083.9**	**1,016.0**
Delaware	19.3	22.7	22.6	21.3	22.0	22.1	21.8
District of Columbia	24.8	27.6	28.0	31.0	32.6	32.6	31.3
Florida	127.4	232.2	232.9	256.2	248.6	281.6	221.9
Georgia	312.5	299.7	270.5	231.9	222.6	202.4	203.6
Maryland	138.8	154.6	118.5	126.1	128.9	133.6	128.6
North Carolina	104.8	143.2	125.3	134.4	131.1	130.6	130.4
South Carolina	118.3	112.3	94.5	100.5	93.2	93.3	95.7
Virginia	116.0	134.8	124.3	123.7	127.9	123.6	118.6
West Virginia	144.3	128.6	78.4	76.4	64.7	64.1	64.1
East South Central	**752.8**	**808.0**	**625.3**	**477.5**	**508.6**	**487.3**	**448.7**
Alabama	227.9	224.6	179.2	129.1	138.6	118.4	110.7
Kentucky	180.0	175.9	141.7	111.5	121.2	118.2	102.7
Mississippi	141.3	191.5	140.9	83.8	83.2	87.5	76.5
Tennessee	203.5	216.1	163.5	153.1	165.6	163.2	158.8
West South Central	**2,973.6**	**3,534.9**	**2,330.4**	**1,950.7**	**1,893.1**	**1,730.0**	**1,685.2**
Arkansas	219.4	207.4	142.9	90.8	118.5	92.5	84.4
Louisiana	457.3	515.2	285.2	256.5	204.7	226.3	211.4
Oklahoma	417.9	472.3	263.4	151.7	171.1	203.7	216.6
Texas	1,878.9	2,340.0	1,638.9	1,451.7	1,398.8	1,207.5	1,172.8
Mountain	**928.6**	**841.9**	**655.4**	**487.7**	**495.6**	**526.6**	**486.1**
Arizona	144.4	136.4	119.4	72.6	70.4	113.6	80.1
Colorado	269.2	242.3	191.6	165.1	173.4	165.8	164.8
Idaho	51.2	45.4	33.0	21.5	17.3	17.3	17.3
Montana	79.8	54.1	44.0	34.7	39.0	42.3	39.0
Nevada	61.3	62.1	41.5	31.4	35.3	33.1	35.5
New Mexico	142.5	125.7	74.7	58.6	55.0	52.2	53.3
Utah	119.4	121.7	113.2	80.6	80.8	78.0	73.2
Wyoming	60.8	54.3	38.0	23.3	24.4	24.3	22.9
Pacific	**2,021.3**	**1,945.9**	**2,019.5**	**1,703.0**	**1,688.3**	**1,658.9**	**1,570.2**
Alaska	30.7	32.3	42.6	39.9	40.3	40.0	40.0
California	1,735.6	1,700.0	1,762.9	1,465.8	1,466.8	1,426.6	1,337.0
Hawaii	3.6	3.5	3.1	3.2	3.3	3.4	3.5
Oregon	86.8	76.4	77.2	68.7	54.1	53.1	55.5
Washington	164.6	133.8	133.7	125.3	123.8	135.8	134.2

a. Excludes sales for resale.

TABLE 6-6
GAS UTILITY INDUSTRY SALES OF GAS FOR RESALE, BY STATE
1975-1990

(Trillions of Btu)

Division and State	1975	1980	1985	1987	1988	1989	1990
United States	**14,504.5**	**15,705.1**	**10,408.1**	**6,497.2**	**6,185.1**	**5,014.7**	**3,982.6**
New England	**271.5**	**299.8**	**291.8**	**313.1**	**232.4**	**192.3**	**141.9**
Connecticut	82.7	76.4	67.2	68.6	59.4	49.5	35.3
Maine	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Massachusetts	160.0	188.8	188.1	169.8	143.0	116.0	87.4
New Hampshire	5.8	6.8	7.6	46.4	5.3	4.3	3.4
Rhode Island	21.8	27.9	28.9	28.3	24.7	22.5	15.8
Vermont	1.3	0.0	0.0	0.0	0.0	0.0	0.0
Middle Atlantic	**1,901.6**	**2,334.0**	**1,671.4**	**1,233.6**	**1,117.9**	**849.8**	**731.7**
New Jersey	370.2	510.6	404.7	380.7	332.2	255.1	194.6
New York	572.2	707.5	566.3	362.7	283.6	233.7	234.1
Pennsylvania	959.2	1,115.9	700.4	490.2	502.1	361.0	303.0
East North Central	**4,542.8**	**4,442.0**	**2,945.1**	**1,308.6**	**1,535.5**	**1,221.4**	**890.9**
Illinois	1,537.1	1,613.3	1,147.1	423.3	573.8	513.8	393.2
Indiana	406.8	461.4	325.8	245.0	213.2	206.9	173.3
Michigan	759.4	615.8	329.7	79.0	153.7	145.4	89.2
Ohio	1,356.1	1,315.3	774.8	409.8	461.8	222.9	129.6
Wisconsin	483.4	436.1	367.7	151.5	133.0	132.4	105.6
West North Central	**1,144.5**	**1,043.9**	**903.9**	**675.4**	**620.3**	**535.6**	**378.7**
Iowa	259.7	208.9	160.8	89.4	95.0	76.4	48.2
Kansas	169.7	149.4	127.6	95.9	80.8	71.9	56.2
Minnesota	239.0	239.1	225.6	184.1	152.0	126.3	105.3
Missouri	338.0	337.8	275.0	211.9	199.2	179.3	125.8
Nebraska	111.7	86.4	73.1	61.8	58.6	52.2	28.3
North Dakota	5.5	4.9	17.4	13.8	15.4	12.0	8.4
South Dakota	20.8	17.5	24.4	18.5	19.3	17.5	6.5
South Atlantic	**1,372.5**	**1,470.3**	**893.7**	**563.5**	**524.1**	**484.3**	**362.1**
Delaware	1.2	1.2	1.8	1.1	1.2	8.7	6.2
District of Columbia	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Florida	82.7	94.7	91.8	97.3	93.9	96.4	82.8
Georgia	315.5	308.7	257.7	128.6	116.5	96.1	81.7
Maryland	151.0	184.5	110.1	75.0	62.5	75.1	17.6
North Carolina	118.5	165.8	124.7	101.4	66.3	28.0	48.4
South Carolina	127.6	135.2	83.9	57.3	49.1	48.7	43.0
Virginia	181.9	209.1	155.4	72.6	68.8	62.5	57.4
West Virginia	394.1	371.2	68.3	30.2	65.8	68.8	25.0
East South Central	**1,178.0**	**1,256.5**	**745.6**	**450.5**	**469.1**	**309.7**	**202.8**
Alabama	219.3	219.8	168.0	67.0	69.8	56.2	31.3
Kentucky	238.4	237.3	157.8	94.0	103.4	67.8	54.5
Mississippi	263.1	289.1	127.1	51.1	39.6	35.5	20.4
Tennessee	457.3	510.3	292.7	238.4	256.3	150.2	96.6
West South Central	**1,215.9**	**2,007.4**	**818.9**	**631.3**	**622.0**	**498.6**	**485.1**
Arkansas	16.1	16.0	12.9	29.1	12.7	9.4	8.4
Louisiana	569.2	661.9	268.5	125.5	115.0	142.5	125.1
Oklahoma	148.6	206.2	61.4	29.4	19.2	28.9	35.0
Texas	482.1	1,123.3	476.1	447.3	475.1	317.8	316.6
Mountain	**1,901.8**	**1,871.0**	**1,490.5**	**683.8**	**516.6**	**416.6**	**315.0**
Arizona	1,341.0	1,370.5	1,062.6	377.7	270.2	175.5	98.7
Colorado	279.6	261.8	194.8	155.5	126.7	127.9	125.0
Idaho	84.2	66.7	50.2	35.9	13.2	3.8	1.0
Montana	7.7	7.6	17.6	13.1	13.9	13.1	10.6
Nevada	9.5	9.9	10.3	10.3	10.6	10.5	6.2
New Mexico	71.8	58.6	37.8	12.1	10.1	18.9	13.7
Utah	7.4	8.4	75.8	59.5	56.3	54.6	49.4
Wyoming	100.6	87.5	41.4	19.7	15.6	12.3	10.4
Pacific	**975.9**	**980.1**	**647.2**	**637.4**	**547.2**	**506.4**	**474.4**
Alaska	0.0	27.4	0.0	0.0	0.0	0.0	0.0
California	346.5	436.5	145.0	145.6	96.1	80.2	57.2
Hawaii	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oregon	470.2	388.3	372.9	411.9	394.6	381.5	378.8
Washington	159.1	127.8	129.3	79.9	56.5	44.7	38.4

TABLE 6-7
GAS UTILITY INDUSTRY SALES, BY STATE AND CLASS OF SERVICE, 1990

(Trillions of Btu)

		Class of Service					
Division and State	Total	Residential	Commercial	Industrial	Electric Generation	Other	Average Btu Value
United States	**9,846.3**	**4,471.4**	**2,193.3**	**1,890.4**	**1,120.1**	**171.1**	**1,030.0**
New England	**388.6**	**170.5**	**104.3**	**65.9**	**44.5**	**3.3**	**1,034.7**
Connecticut	91.4	40.4	26.1	23.2	1.6	0.1	1,033.6
Maine	4.3	0.6	1.7	2.0	0.0	0.0	1,039.0
Massachusetts	238.5	101.3	61.2	31.2	42.2	2.6	1,038.7
New Hampshire	16.0	6.9	5.4	3.2	0.0	0.5	1,020.4
Rhode Island	31.4	19.0	8.4	3.8	a	0.2	1,024.0
Vermont	7.0	2.3	1.5	2.5	0.7	a	986.9
Middle Atlantic	**1,334.8**	**775.9**	**329.4**	**169.3**	**26.1**	**34.1**	**1,037.1**
New Jersey	354.4	176.1	113.1	53.5	11.5	0.2	1,048.2
New York	570.6	352.0	124.7	53.6	14.2	26.1	1,030.2
Pennsylvania	409.8	247.8	91.6	62.2	0.4	7.8	1,037.0
East North Central	**2,084.5**	**1,343.1**	**497.3**	**229.9**	**5.2**	**9.0**	**1,023.7**
Illinois	620.7	425.8	136.8	55.3	2.7	0.1	1,023.9
Indiana	262.1	145.9	66.3	48.0	0.4	1.5	991.0
Michigan	480.6	335.0	115.0	30.3	0.2	0.2	1,029.0
Ohio	491.5	321.8	123.7	39.0	0.5	6.5	1,043.6
Wisconsin	229.6	114.6	55.5	57.3	1.4	0.8	1,006.8
West North Central	**832.2**	**434.5**	**264.7**	**126.1**	**4.5**	**2.5**	**1,025.1**
Iowa	149.2	71.4	42.3	33.2	2.0	0.4	1,010.0
Kansas	134.0	72.2	48.0	13.4	0.4	0.2	998.6
Minnesota	224.1	108.4	65.4	48.2	1.4	0.7	1,002.3
Missouri	195.2	120.1	62.0	11.8	0.3	1.0	1,012.3
Nebraska	90.4	42.5	32.1	15.0	0.5	0.2	981.0
North Dakota	18.3	9.5	8.3	0.5	a	a	1,031.5
South Dakota	21.0	10.4	6.6	4.0	0.0	0.0	1,823.3
South Atlantic	**1,016.0**	**344.1**	**238.7**	**291.2**	**139.6**	**2.4**	**1,032.7**
Delaware	21.8	7.5	4.2	9.0	1.1	a	1,034.7
District of Columbia	31.3	12.4	18.9	0.0	0.0	0.0	1,021.0
Florida	221.9	12.8	33.2	51.1	124.3	0.4	1,033.2
Georgia	203.6	98.8	46.3	56.1	1.9	0.4	1,028.6
Maryland	128.6	65.6	32.2	21.3	9.6	a	1,030.7
North Carolina	130.4	37.1	28.6	64.2	0.3	0.1	1,032.0
South Carolina	95.7	19.1	15.7	59.9	0.9	0.2	1,028.5
Virginia	118.6	49.6	43.4	24.1	0.4	1.1	1,035.9
West Virginia	64.1	41.2	16.2	5.5	1.1	0.1	1,056.2
East South Central	**448.7**	**179.5**	**109.1**	**149.4**	**0.9**	**9.8**	**1,033.6**
Alabama	110.7	48.1	24.6	36.5	0.8	0.8	1,030.8
Kentucky	102.7	57.5	26.4	14.1	0.0	4.7	1,027.0
Mississippi	76.5	25.5	13.7	33.4	0.1	3.7	1,033.8
Tennessee	158.8	48.4	44.4	65.4	a	0.6	1,039.8
West South Central	**1,685.2**	**357.5**	**198.3**	**513.2**	**521.6**	**94.7**	**1,036.9**
Arkansas	84.4	38.2	22.3	23.6	0.0	0.3	1,009.7
Louisiana	211.4	53.9	19.9	60.7	14.5	62.4	1,042.5
Oklahoma	216.6	67.3	33.6	113.0	1.9	0.8	1,025.1
Texas	1,172.8	198.1	122.6	315.9	505.2	31.1	1,040.8
Mountain	**486.1**	**258.7**	**162.2**	**40.0**	**12.5**	**12.7**	**1,014.8**
Arizona	80.1	29.1	23.3	12.3	10.3	5.1	1,032.2
Colorado	164.8	94.3	65.1	4.7	0.4	0.3	990.7
Idaho	17.3	8.7	6.5	2.1	0.0	a	1,026.3
Montana	39.0	19.1	12.2	6.4	a	1.3	1,019.7
Nevada	35.5	17.7	15.1	0.9	0.3	0.4	1,035.2
New Mexico	53.3	30.6	14.1	2.9	1.3	5.5	1,073.7
Utah	73.2	47.3	17.6	8.1	0.1	a	1,000.0
Wyoming	22.9	11.8	8.3	2.5	0.1	0.1	1,003.6
Pacific	**1,570.2**	**607.6**	**289.4**	**305.4**	**365.2**	**2.6**	**1,029.2**
Alaska	40.0	13.9	11.9	0.0	14.1	0.0	1,003.0
California	1,337.0	528.3	217.7	237.8	351.0	2.2	1,029.8
Hawaii	3.5	0.6	1.7	1.2	0.0	0.0	1,080.0
Oregon	55.5	24.0	20.3	11.3	a	0.0	1,023.2
Washington	134.2	40.8	37.8	55.2	0.1	0.4	1,032.0

a. Less than 0.05 trillion Btu.

Note: See explanation on page 67 about transportation volumes.

TABLE 6-8
GAS UTILITY INDUSTRY FIRM AND INTERRUPTIBLE GAS SALES BY STATE, 1990

(Trillions of Btu)

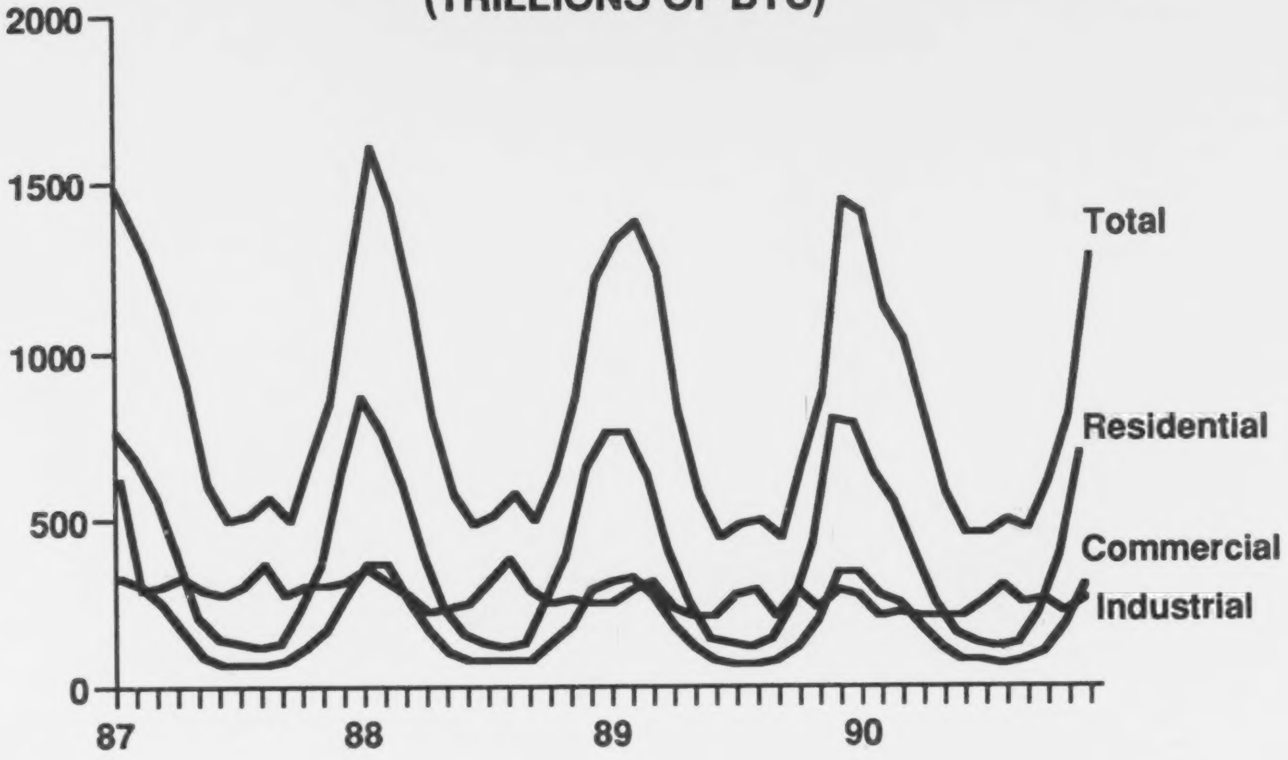
Division and State	Commercial			Industrial[a]		
	Total	Firm	Interruptible	Total	Firm	Interruptible
United States	**2,193.3**	**1,944.1**	**249.2**	**1,890.4**	**781.8**	**1,108.6**
New England	**104.3**	**94.6**	**9.6**	**65.9**	**31.5**	**34.4**
Connecticut	26.1	20.8	5.3	23.2	10.4	12.8
Maine	1.7	1.7	0.0	2.0	0.9	1.1
Massachusetts	61.2	58.5	2.7	31.2	16.5	14.7
New Hampshire	5.4	5.4	b	3.2	1.3	1.9
Rhode Island	8.4	6.7	1.7	3.8	2.4	1.4
Vermont	1.5	1.5	0.0	2.5	b	2.5
Middle Atlantic	**329.4**	**295.8**	**33.6**	**169.3**	**95.5**	**73.8**
New Jersey	113.1	88.9	24.2	53.5	22.8	30.7
New York	124.7	121.1	3.6	53.6	34.3	19.3
Pennsylvania	91.6	85.8	5.8	62.2	38.3	23.9
East North Central	**497.3**	**487.2**	**10.1**	**229.9**	**173.9**	**56.0**
Illinois	136.8	135.4	1.4	55.3	46.0	9.3
Indiana	66.3	63.0	3.3	48.0	32.7	15.3
Michigan	115.0	115.0	b	30.3	28.4	1.9
Ohio	123.7	123.0	0.7	39.0	33.9	5.1
Wisconsin	55.5	50.8	4.7	57.3	32.9	24.4
West North Central	**264.7**	**238.6**	**26.1**	**126.1**	**54.2**	**71.8**
Iowa	42.3	36.1	6.2	33.2	22.2	11.0
Kansas	48.0	44.3	3.7	13.4	4.7	8.7
Minnesota	65.4	57.7	7.7	48.2	13.2	35.0
Missouri	62.0	58.0	4.0	11.8	7.7	4.1
Nebraska	32.1	28.5	3.6	15.0	4.6	10.4
North Dakota	8.3	7.7	0.6	0.5	0.2	0.3
South Dakota	6.6	6.3	0.3	4.0	1.7	2.3
South Atlantic	**238.7**	**204.4**	**34.3**	**291.2**	**108.9**	**182.3**
Delaware	4.2	4.2	0.0	9.0	5.3	3.7
District of Columbia	18.9	10.5	8.4	0.0	0.0	0.0
Florida	33.2	32.1	1.1	51.1	2.8	48.3
Georgia	46.3	46.0	0.3	56.1	19.6	36.5
Maryland	32.2	23.2	9.0	21.3	14.6	6.7
North Carolina	28.6	26.3	2.3	64.2	29.8	34.4
South Carolina	15.7	12.2	3.5	59.9	20.8	39.1
Virginia	43.4	34.9	8.5	24.1	14.1	10.0
West Virginia	16.2	15.0	1.2	5.5	1.9	3.6
East South Central	**109.1**	**104.6**	**4.5**	**149.4**	**104.7**	**44.7**
Alabama	24.6	22.2	2.4	36.5	19.5	17.0
Kentucky	26.4	26.3	0.1	14.1	9.5	4.6
Mississippi	13.7	13.7	b	33.4	31.3	2.1
Tennessee	44.4	42.4	2.0	65.4	44.4	21.0
West South Central	**198.3**	**194.9**	**3.4**	**513.2**	**164.7**	**348.5**
Arkansas	22.3	22.3	b	23.6	10.3	13.3
Louisiana	19.9	19.8	0.1	60.7	43.5	17.2
Oklahoma	33.6	31.2	2.4	113.0	55.6	57.4
Texas	122.6	121.6	0.9	315.9	55.3	260.6
Mountain	**162.2**	**160.9**	**1.3**	**40.0**	**26.4**	**13.6**
Arizona	23.3	23.0	0.3	12.3	12.0	0.3
Colorado	65.1	64.5	0.6	4.7	1.4	3.3
Idaho	6.5	6.5	0.0	2.1	2.0	0.1
Montana	12.2	12.2	b	6.4	0.9	5.5
Nevada	15.1	15.1	0.0	0.9	0.9	0.0
New Mexico	14.1	13.7	0.4	2.9	2.9	b
Utah	17.6	17.6	0.0	8.1	5.6	2.6
Wyoming	8.3	8.3	b	2.5	0.7	1.8
Pacific	**289.4**	**163.1**	**126.3**	**305.4**	**21.0**	**283.5**
Alaska	11.9	11.9	0.0	0.0	0.0	0.0
California	217.7	101.5	116.2	237.8	3.9	233.9
Hawaii	1.7	1.3	0.4	1.2	1.2	0.0
Oregon	20.3	20.3	0.0	11.3	7.1	4.2
Washington	37.8	28.1	9.7	55.2	9.8	45.4

a. Does not include electric generation. See Table 6-13.
b. Less than 0.05 trillion Btu.

CHART 6-2

UTILITY SALES OF NATURAL GAS TO CONSUMERS BY MONTH, 1987 - 1990

(TRILLIONS OF BTU)



REFERENCE: TABLE 6-4

TABLE 6-9
GAS UTILITY INDUSTRY SALES BY TYPE OF INDUSTRY CLASSIFICATION, 1970–1987

(Trillions of Btu)

Industry Classification	1970	1975	1980	1985	1986	1987
Agriculture, forestry and fisheries	33.0	49.7	47.1	46.5	36.5	18.4
Petroleum and natural gas production	101.0	83.8	32.2	45.6	28.5	35.4
Other mining	59.8	49.3	55.6	27.7	19.9	5.8
Electric services[a]	2,588.6	1,685.2	2,520.5	2,327.1	1,769.0	1,908.4
Other transportation, communications, and public utilities	96.2	95.9	92.5	94.3	75.1	62.8
Hotels, rooming houses, camps	67.3	77.8	27.8	34.3	37.2	32.2
Laundries, cleaning and dyeing	21.5	24.3	22.0	28.5	30.7	24.8
Other services	175.1	236.7	309.5	372.5	355.5	277.1
Other non-manufacturing	198.6	187.5	151.8	288.7	316.2	270.9
Ordnance	35.4	b	b	b	b	b
Food and kindred products	330.5	338.9	320.2	252.5	196.8	125.1
Textile products, apparel, fabrics, etc.	72.5	54.6	64.3	57.4	58.1	57.9
Furniture, lumber, and other wood products	64.9	61.1	45.7	36.7	28.2	24.3
Paper and allied products	402.7	267.6	257.8	187.6	134.0	104.2
Carbon black	52.8	38.2	34.1	2.2	1.5	1.0
Chemicals and allied products (except carbon black)	880.7	886.5	603.8	35.6	355.8	173.5
Petroleum refining	639.6	514.5	372.0	118.3	62.5	28.7
Rubber and miscellaneous plastic products	47.8	45.1	50.7	42.2	32.3	24.9
Glass products	208.8	173.7	170.9	93.7	76.8	43.3
Cement	195.0	158.1	49.2	8.3	5.7	3.3
Clay products, pottery, etc.	145.3	110.0	86.4	58.0	47.6	28.8
Other stone products and miscellaneous	82.3	97.0	85.5	48.9	41.6	25.2
Primary iron and steel industries	669.0	555.5	546.3	265.9	172.3	78.2
Primary non-ferrous industries	232.9	275.9	194.4	124.5	84.2	50.4
Fabricated metal products, machinery equipment and supplies	289.8	276.8	233.1	195.7	171.9	111.9
Transportation equipment	170.8	140.2	84.4	82.9	63.4	42.8
Other manufacturing	100.0	122.1	121.0	141.0	148.2	65.9
Public administration	c	72.1	70.0	91.9	91.2	82.7
Unclassified[d]	1,434.9	3,495.4	4,349.3	2,858.4	2,619.4	2,845.9
Total Gas Utility Industry Commercial, Industrial and "Other" sales[a,e]	**9,396.8**	**10,173.5**	**10,998.1**	**8,466.9**	**7,059.7**	**6,554.0**
Total Commercial, Industrial and "Other" sales of co.'s reporting this table	**8,022.9**	**8,786.0**	**7,851.5**	**5,926.7**	**4,886.7**	**3,571.0**
Transfers[a]	**283.6**	**301.6**	**411.1**	**364.5**	**315.3**	**395.2**

a. Includes the quantities of gas for electric generation detailed as "Transfers" which are not included in Total Commercial, Industrial, and "Other" sales of companies reporting this table or in Total Gas Utility Industry sales. Such quantities represent transfers by the gas department to the electric department of combination gas and electric companies.

b. Classification eliminated.

c. New classification in 1972.

d. Difference between total and classified volumes.

e. Includes Industrial and "Other" sales only prior to 1971.

Note: Prior to 1982 only large volume sales detailed by SIC. After 1987, data collection reformatted. See Table 6-10.

SALES—QUANTITIES

TABLE 6-12
GAS CONSUMED FOR ELECTRIC GENERATION,[a] BY STATE, 1975-1990

(Millions of Cubic Feet)

Division and State	1975	1980	1985	1987	1988	1989R	1990
United States	**3,146,874**	**3,681,595**	**3,044,083**	**2,844,051**	**2,635,613**	**2,787,012**	**2,776,190**
New England	**2,523**	**7,001**	**49,346**	**52,884**	**21,374**	**53,949**	**66,235**
Connecticut	344	0	1,559	7,350	1,260	3,294	4,845
Maine	0	0	0	0	0	0	0
Massachusetts	1,437	5,083	45,161	40,183	19,874	48,448	55,221
New Hampshire	177	0	67	15	55	23	0
Rhode Island	11	1,679	2,532	5,336	185	2,147	5,484
Vermont	555	239	95	0	0	37	685
Middle Atlantic	**23,436**	**206,769**	**235,563**	**250,458**	**202,208**	**241,435**	**273,208**
New Jersey	8,601	79,513	61,362	75,138	51,066	55,412	47,591
New York	13,613	124,391	172,631	173,328	148,495	182,000	223,253
Pennsylvania	1,213	2,865	1,570	1,993	2,649	4,022	2,364
East North Central	**118,394**	**65,883**	**19,141**	**18,288**	**27,901**	**32,883**	**42,237**
Illinois	34,176	19,165	5,881	3,172	5,706	6,967	9,195
Indiana	10,994	1,904	1,117	1,315	3,455	4,075	6,632
Michigan	47,151	26,368	10,126	10,754	15,027	18,782	22,774
Ohio	6,139	4,706	699	871	974	983	1,254
Wisconsin	19,935	13,740	1,317	2,176	2,739	2,076	2,381
West North Central	**264,825**	**143,387**	**27,333**	**28,241**	**33,459**	**29,948**	**43,101**
Iowa	46,929	6,835	2,100	3,265	5,459	2,402	3,439
Kansas	127,818	101,022	21,181	16,074	18,890	19,152	26,951
Minnesota	22,709	8,077	1,275	5,700	5,217	4,427	5,175
Missouri	26,320	15,329	1,466	1,379	1,623	1,242	3,532
Nebraska	37,659	11,850	1,284	1,743	2,046	2,593	3,766
North Dakota	157	15	2	3	2	1	2
South Dakota	3,232	259	26	77	223	132	235
South Atlantic	**199,105**	**191,409**	**177,934**	**199,769**	**168,894**	**222,979**	**233,767**
Delaware	1,697	6,999	7,266	7,847	2,824	7,999	10,776
District of Columbia	0	0	0	0	0	0	0
Florida	141,153	166,047	165,683	175,675	154,550	186,814	187,994
Georgia	40,282	3,666	885	826	1,569	684	1,932
Maryland	451	5,230	1,372	11,757	5,336	19,184	17,475
North Carolina	101	1,702	595	1,162	1,068	1,673	2,461
South Carolina	14,566	5,418	483	538	2,378	2,705	6,975
Virginia	496	2,285	1,528	1,724	1,096	3,796	6,014
West Virginia	358	62	122	239	73	124	139
East South Central	**37,774**	**99,461**	**55,779**	**42,930**	**36,512**	**47,033**	**69,916**
Alabama	5,994	1,382	1,078	1,474	2,574	1,760	3,958
Kentucky	272	1,902	1,121	336	452	328	283
Mississippi	31,507	95,073	53,579	41,119	33,261	44,927	65,111
Tennessee	0	1,104	0	0	225	18	565
West South Central	**2,042,085**	**2,243,820**	**1,694,726**	**1,516,669**	**1,493,530**	**1,476,260**	**1,468,284**
Arkansas	31,818	58,863	11,411	32,057	22,075	29,462	32,112
Louisiana	356,130	424,991	285,039	246,912	250,323	244,984	263,341
Oklahoma	300,848	329,940	200,686	187,895	177,222	178,021	168,960
Texas	1,353,290	1,430,026	1,197,590	1,049,804	1,043,910	1,023,793	1,003,872
Mountain	**164,636**	**175,032**	**83,716**	**60,855**	**66,203**	**110,815**	**80,927**
Arizona	17,693	49,699	41,731	26,665	25,328	50,807	24,278
Colorado	52,930	31,928	4,913	7,826	8,488	8,375	5,485
Idaho	18	46	24	3	0	0	0
Montana	1,059	4,182	468	478	286	336	418
Nevada	25,152	27,541	8,080	7,076	10,658	23,210	24,351
New Mexico	64,239	56,280	28,133	18,454	21,064	27,365	25,420
Utah	2,725	5,133	235	263	196	636	907
Wyoming	819	222	132	90	183	85	69
Pacific	**294,105**	**548,833**	**700,545**	**673,958**	**585,532**	**517,708**	**498,516**
Alaska	19,619	28,763	34,194	30,530	30,841	32,746	34,366
California	274,483	518,808	666,274	643,335	552,938	517,700	456,573
Hawaii	0	0	0	0	0	0	0
Oregon	3	321	0	0	0	12,942	7,386
Washington	0	941	77	93	1,753	8,320	191

a. Includes direct sales by producers to electric utilities as well as sales by the gas utility industry.

R–Revised.

Source: U.S. Department of Energy, Energy Information Administration, *Electric Power Monthly*, December 1990.

TABLE 6-13
GAS UTILITY INDUSTRY GAS USED FOR ELECTRIC GENERATION, 1967-1990[a]

(Trillions of Btu)

	Sales					
	Industrial[b]					
Year	Firm	Interruptible	Other	Total Sales	Transfers[c]	Total Sales and Transfers
1967	1,386.9		316.7	1,703.6	254.3	1,957.9
1968	1,489.6		381.3	1,870.9	270.9	2,141.8
1969	1,643.9		360.8	2,004.7	232.6	2,237.3
1970	1,877.5		427.5	2,305.0	283.6	2,588.6
1971	853.6	1,083.6	483.4	2,420.6	595.2	3,015.9
1972	956.5	858.4	553.3	2,368.4	549.5	2,917.9
1973	542.8	871.6	511.4	1,925.8	477.2	2,403.0
1974	497.2	812.5	387.9	1,697.6	419.8	2,117.4
1975	374.5	623.4	385.8	1,383.6	301.6	1,685.2
1976	478.1	889.5	d	1,367.6	250.9	1,618.5
1977	489.1	959.6	d	1,448.7	241.1	1,689.8
1978	544.2	854.0	d	1,398.2	187.9	1,586.1
1979	665.2	980.0	d	1,645.2	335.0	1,980.2
1980	971.9	1,137.7	d	2,109.6	411.1	2,520.7
1981	997.9	1,264.3	d	2,262.2	343.8	2,606.1
1982	775.8	1,157.6	d	1,933.4	367.9	2,301.3
1983	632.2	973.3	d	1,605.5	368.3	1,973.8
1984	670.5	1,079.5	d	1,750.0	405.8	2,155.8
1985	835.4	1,113.3	d	1,948.7	364.5	2,313.2
1986	681.0	766.1	d	1,447.1	315.3	1,762.4
1987	581.7	927.3	d	1,509.0	395.2	1,904.2
1988	455.4	880.5	d	1,335.9	337.7	1,673.6
1989[R]	450.8	829.4	d	1,280.2	372.3	1,652.5
1990	458.6	661.5	d	1,120.1	400.0	1,524.1

a. Excludes direct sales by producers to electric utilities.
b. No breakdown available prior to 1971.
c. Represents transfers by the gas department to the electric department of combination gas and electric companies.
d. Other now included with Industrial to conform to the definition of industrial services.
R–Revised.

TABLE 6-14
GAS UTILITY INDUSTRY GAS USED FOR ELECTRIC GENERATION, BY STATE, 1990[a]

(Trillions of Btu)

Division of State	Industrial Sales			Transfers[b]	Total Sales and Transfers
	Firm	Interruptible	Total		
United States	**458.6**	**661.5**	**1,120.1**	**400.0**	**1,524.1**
New England	**c**	**44.5**	**44.5**	**0.0**	**44.5**
Connecticut	c	1.6	1.6	0.0	1.6
Maine	0.0	0.0	0.0	0.0	0.0
Massachusetts	0.0	42.2	42.2	0.0	42.2
New Hampshire	0.0	0.0	0.0	0.0	0.0
Rhode Island	0.0	c	c	0.0	c
Vermont	0.0	0.7	0.7	0.0	0.7
Middle Atlantic	**1.5**	**24.6**	**26.1**	**218.9**	**245.0**
New Jersey	1.0	10.5	11.5	36.3	47.8
New York	0.2	14.0	14.2	182.6	196.8
Pennsylvania	0.3	0.1	0.4	0.0	0.4
East North Central	**2.4**	**2.8**	**5.2**	**1.5**	**6.7**
Illinois	0.5	2.2	2.7	0.3	3.0
Indiana	0.4	0.0	0.4	1.2	1.6
Michigan	0.2	c	0.2	0.0	0.2
Ohio	0.3	0.2	0.5	0.0	0.5
Wisconsin	1.0	0.4	1.4	0.0	1.4
West North Central	**1.7**	**2.8**	**4.5**	**4.3**	**8.7**
Iowa	0.5	1.5	2.0	0.3	2.3
Kansas	0.3	0.1	0.4	c	0.4
Minnesota	0.8	0.6	1.4	0.8	2.2
Missouri	0.1	0.1	0.2	3.1	3.3
Nebraska	c	0.5	0.5	0.0	0.5
North Dakota	0.0	c	c	0.0	c
South Dakota	0.0	0.0	0.0	c	c
South Atlantic	**2.9**	**136.7**	**139.6**	**20.6**	**160.2**
Delaware	0.1	1.0	1.1	5.5	6.6
District of Columbia	0.0	0.0	0.0	0.0	0.0
Florida	2.8	121.5	124.3	0.0	124.3
Georgia	0.0	1.9	1.9	0.0	1.9
Maryland	0.0	9.6	9.6	8.8	18.4
North Carolina	0.0	0.3	0.3	0.0	0.3
South Carolina	0.0	0.9	0.9	6.3	7.1
Virginia	0.0	0.4	0.4	0.0	0.4
West Virginia	0.0	1.1	1.1	0.0	1.1
East South Central	**0.3**	**0.6**	**0.9**	**c**	**0.9**
Alabama	0.3	0.5	0.8	0.0	0.8
Kentucky	0.0	0.0	0.0	c	c
Mississippi	0.1	0.1	0.1	0.0	0.1
Tennessee	0.0	c	c	0.0	c
West South Central	**406.8**	**114.8**	**521.6**	**135.3**	**656.9**
Arkansas	0.0	0.0	0.0	0.0	0.0
Louisiana	0.9	13.6	14.5	23.2	37.7
Oklahoma	1.6	0.3	1.9	71.4	73.4
Texas	404.3	100.9	505.2	40.7	545.9
Mountain	**12.1**	**0.4**	**12.5**	**19.4**	**35.9**
Arizona	10.2	c	10.3	0.0	14.3
Colorado	0.1	0.3	0.4	2.1	2.5
Idaho	0.0	0.0	0.0	0.0	0.0
Montana	0.0	c	c	0.3	0.3
Nevada	1.3	0.0	1.3	17.0	18.3
New Mexico	0.3	0.0	0.3	0.0	0.3
Utah	0.0	0.1	0.1	0.0	0.1
Wyoming	0.1	0.0	0.1	0.0	0.1
Pacific	**30.9**	**334.3**	**365.2**	**0.0**	**365.2**
Alaska	14.1	0.0	14.1	0.0	14.1
California	16.7	334.3	351.0	0.0	351.0
Hawaii	0.0	0.0	0.0	0.0	0.0
Oregon	0.0	c	c	0.0	c
Washington	0.1	0.0	0.1	0.0	0.1

a. Excludes direct sales by producers to electric utilities.

b. Volumes transferred by the gas department to the electric department of combination gas and electric companies.

c. Less than 0.05 trillion Btu.

TABLE 6-15
TOTAL LIQUEFIED PETROLEUM GAS SALES BY CONSUMING SECTOR
1970-1989[a]

(Trillions of Btu)

Year	Total	Sector			
		Residential	Commercial	Industrial	Transportation
1970	1,688.5	578.9	102.2	963.9	43.6
1971	1,722.9	585.4	103.3	983.9	50.3
1972	1,954.6	628.0	110.8	1,163.9	51.9
1973	1,980.7	594.8	105.0	1,232.7	48.3
1974	1,913.8	545.9	96.3	1,227.3	44.3
1975	1,807.1	527.8	93.1	1,144.5	41.7
1976	1,907.3	549.2	96.9	1,215.7	45.5
1977	1,907.9	533.5	94.1	1,232.4	47.9
1978	1,891.9	516.4	91.1	1,232.9	51.5
1979	2,138.1	354.8	62.6	1,699.9	20.8
1980	1,976.0	325.1	57.4	1,576.6	16.9
1981	1,948.9	310.9	54.9	1,550.9	32.2
1982	1,978.4	296.1	52.3	1,598.0	32.1
1983	1,990.2	352.4	62.2	1,537.5	38.1
1984	2,071.2	379.0	66.9	1,585.3	40.1
1985	2,102.7	422.5	74.6	1,578.0	27.7
1986	2,009.5	413.0	72.9	1,497.7	25.9
1987	2,152.5	421.5	74.4	1,636.0	20.6
1988	2,213.4	454.4	80.2	1,656.5	22.2
1989	2,242.7	504.7	89.1	1,627.1	21.6

a. Liquefied petroleum gases include ethane, ethylene, propane, propylene, butane, butylene, butane-propane mixture, ethane-propane mixture, and isobutane. The 1979-1989 LPG data may not be directly comparable to the pre-1979 data due to modifications to the LPG sales survey form and an updated sampling frame.

Source: U.S. Department of Energy, Energy Information Administration, *State Energy Data Reports.*

SECTION 7
REVENUES

	1990	% Change 90/89
Gas Utility Industry		
(Thousands)		
Total Revenues (From sales)	$45,173,901	− 4.9
Residential	25,013,880	− 4.4
Commercial	10,609,970	− 4.2
Industrial	8,996,743	− 6.9
Industrial Only	6,034,227	− 2.9
Electric Generation	2,962,516	−14.1
Other	553,308	− 4.9
Resale	$14,105,108	−18.4

TABLE 6-10

GAS UTILITY INDUSTRY COMMERCIAL AND OTHER GAS VOLUMES, BY TYPE OF INDUSTRY CLASSIFICATION AND BY DIVISION, 1990

(Trillions of Btu)

Industry Classification	Standard Industrial Classification	Total U.S.	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Agriculture, Forestry and Fishing	01-09	26.4	0.2	1.4	6.9	2.0	0.7	0.2	0.5	5.5	9.1
Mining[b]	10-14	1.1	a	0.2	0.2	0.2	a	0.1	0.1	0.2	0.1
Construction	15-17	12.0	0.6	1.2	3.8	1.4	0.8	0.3	0.6	1.7	1.7
Manufacturing[b]	20-39	96.4	0.9	22.2	14.5	6.0	7.9	4.7	3.2	3.8	33.2
Transportation	40-48	40.6	1.6	5.3	10.3	3.3	3.0	0.8	3.7	3.9	8.7
Utility Services other than Electric Generation	49	29.5	0.5	5.7	6.0	3.1	2.2	0.3	1.1	1.1	9.5
Wholesale Trade	50-51	36.5	1.3	2.9	13.2	3.3	3.7	0.8	2.9	2.9	5.7
Retail Trade	50-57, 59	85.3	3.2	11.9	25.3	8.6	7.6	2.4	3.6	8.1	14.5
Restaurants and Drinking Places	58	91.6	4.4	11.6	17.0	5.2	7.2	4.7	7.4	4.4	29.5
Finance and Insurance	60-64, 66, 67	16.4	0.6	1.7	4.1	1.9	1.0	0.6	1.6	1.7	3.3
Real Estate (Apartments)	65	169.6	11.3	39.2	36.0	12.6	20.7	1.4	16.9	17.7	13.8
Hotels & Other Lodging Places	70	41.2	1.3	5.8	6.9	3.1	4.2	1.3	3.2	4.3	11.2
Services	72-79	103.0	3.6	13.5	23.3	6.9	8.0	4.0	8.2	8.2	27.3
Health Services, Hospitals	80	109.3	3.9	15.8	27.7	9.6	15.3	5.4	7.9	4.2	19.5
Legal & Social Services	81, 83, 84	13.8	0.3	1.6	3.8	1.5	1.1	0.5	1.2	0.7	3.2
Education (Schools)	82	144.5	3.9	19.8	44.0	15.7	12.0	5.6	11.6	9.8	22.2
Membership Organizations & Miscellaneous Services	86-89	64.4	1.5	10.7	23.0	5.8	6.0	2.8	4.5	3.5	6.7
Public Administration	91-97	82.1	4.0	16.1	13.6	6.0	9.8	3.0	7.3	6.8	15.4
Non-Classifiable	99	78.3	3.2	8.7	2.4	23.0	7.6	a	6.4	15.1	12.0
Not Classified		1,491.0	62.4	217.8	429.9	170.2	137.0	86.2	235.8	83.9	67.3
Total Gas Utility Industry, Commercial & Other Sales & Transportation		**2,733.0**	**108.7**	**413.1**	**711.9**	**289.4**	**255.8**	**125.1**	**327.7**	**187.5**	**313.9**
Total Gas Utility Industry, Commercial & Other Sales & Transportation of Companies reporting this table		**1,842.0**	**60.1**	**319.9**	**460.5**	**166.2**	**190.4**	**68.9**	**174.0**	**140.2**	**261.7**

a. Less than 0.05 trillion Btu.

b. These groups are generally considered as industrial by the gas industry, but non-manufacturing uses such as those for office buildings and warehouses associated with manufacturing facilities are considered to be commercial.

TABLE 6-11

GAS UTILITY INDUSTRY INDUSTRIAL AND ELECTRIC GENERATION VOLUMES, BY TYPE OF INDUSTRY CLASSIFICATION AND BY DIVISION, 1990

(Trillions of Btu)

Industry Classification	Standard Industrial Classification	Total U.S.	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Agriculture, Forestry and Fishing[b]	01-09	19.9	a	0.3	5.3	2.0	0.3	0.4	6.1	1.6	4.1
Mining	10-14	159.4	0.1	0.8	3.4	2.3	0.3	0.3	4.5	3.3	144.5
Construction[b]	15-17	6.6	0.1	0.3	1.6	1.4	1.0	0.1	0.6	0.6	0.7
Food & Kindred Products	20	251.6	2.2	21.4	72.6	36.6	25.3	11.9	17.6	9.0	55.1
Tobacco Manufacturers	21	2.2	0.1	0.1	0.3	a	0.9	0.8	a	0.0	0.0
Textile Mill Products	22	68.0	5.1	5.0	2.0	0.1	44.3	4.6	0.6	a	6.3
Apparel & Other Textile Products	23	12.3	0.3	0.8	0.8	0.1	2.6	5.9	1.1	0.1	0.6
Lumber & Wood Products	24	26.8	0.1	0.9	3.3	1.1	1.3	1.1	3.5	1.4	14.2
Furniture & Fixtures	25	8.0	0.1	1.0	2.7	0.5	1.3	0.7	0.6	0.1	0.9
Paper & Allied Products	26	219.7	2.5	22.4	47.8	8.1	26.9	12.0	28.3	3.8	68.0
Printing & Publishing	27	16.0	0.5	2.1	7.1	0.9	2.4	0.8	0.5	0.1	1.6
Chemicals & Allied Products	28	290.9	3.6	28.4	69.4	18.1	74.1	15.7	47.8	13.3	20.4
Petroleum & Coal Products	29	163.7	0.3	6.6	32.1	2.6	6.5	9.8	23.1	11.0	71.6
Rubber & Miscellaneous Plastic Products	30	50.2	1.2	5.3	21.5	1.0	7.9	6.0	2.7	1.2	3.4
Leather & Leather Products	31	2.3	0.1	0.5	1.1	0.2	a	0.1	0.1	a	0.1
Stone, Clay, Glass & Concrete Products	32	227.6	2.8	45.2	52.0	8.7	54.8	19.7	11.2	7.9	25.3
Primary Iron & Steel	331-332	347.4	2.2	59.3	202.6	2.7	28.8	29.8	3.8	9.0	9.1
Primary Nonferrous Metals	333-339	111.2	1.5	13.0	41.2	5.5	5.5	9.2	10.4	8.7	16.2
Fabricated Metal Products	34	94.4	2.8	14.2	46.1	3.8	5.2	6.4	6.9	0.7	8.2
Machinery, Except Electrical	35	57.8	1.3	12.7	26.3	4.2	3.7	2.4	2.3	0.7	4.2
Electric & Electronic Equipment	36	50.1	1.9	9.9	18.3	2.0	6.3	3.8	3.1	0.5	4.2
Transportation Equipment	37	65.6	3.4	4.9	32.8	1.3	6.7	4.4	2.2	2.6	7.3
Instruments & Related Products	38	10.9	1.2	3.8	1.9	0.4	1.7	0.4	0.4	0.1	1.0
Other Manufacturing	39	24.5	1.2	5.0	6.9	1.7	1.2	1.9	2.9	1.0	2.8
Transportation[b]	40-48	21.8	a	7.7	4.1	2.8	2.3	1.7	1.5	0.8	0.8
Utility Services other than Electric Generation[b]	49	99.7	2.4	14.2	4.1	5.6	7.3	0.6	0.4	2.2	63.0
Electric Generation[c]	491, 493	1,661.1	77.3	50.6	28.2	14.4	157.2	15.7	781.6	46.7	489.4
Not Classified		2,857.3	32.8	161.3	434.9	242.5	131.1	178.8	1,436.6	87.0	219.4
Total Gas Utility Industry, Industrial & Electric Generation Sales & Transportation		**6,926.8**	**147.1**	**497.6**	**1,170.5**	**370.7**	**703.7**	**344.8**	**2,236.4**	**213.5**	**1,242.5**
Total Gas Utility Industry, Industrial & Electric Generation Sales & Transportation of Companies reporting this table		**3,416.6**	**41.3**	**336.0**	**851.1**	**201.4**	**364.0**	**160.4**	**652.7**	**112.2**	**697.4**
Transfers[c]		**399.9**	**0.0**	**218.9**	**1.5**	**4.3**	**20.6**	**a**	**135.3**	**19.4**	**0.0**

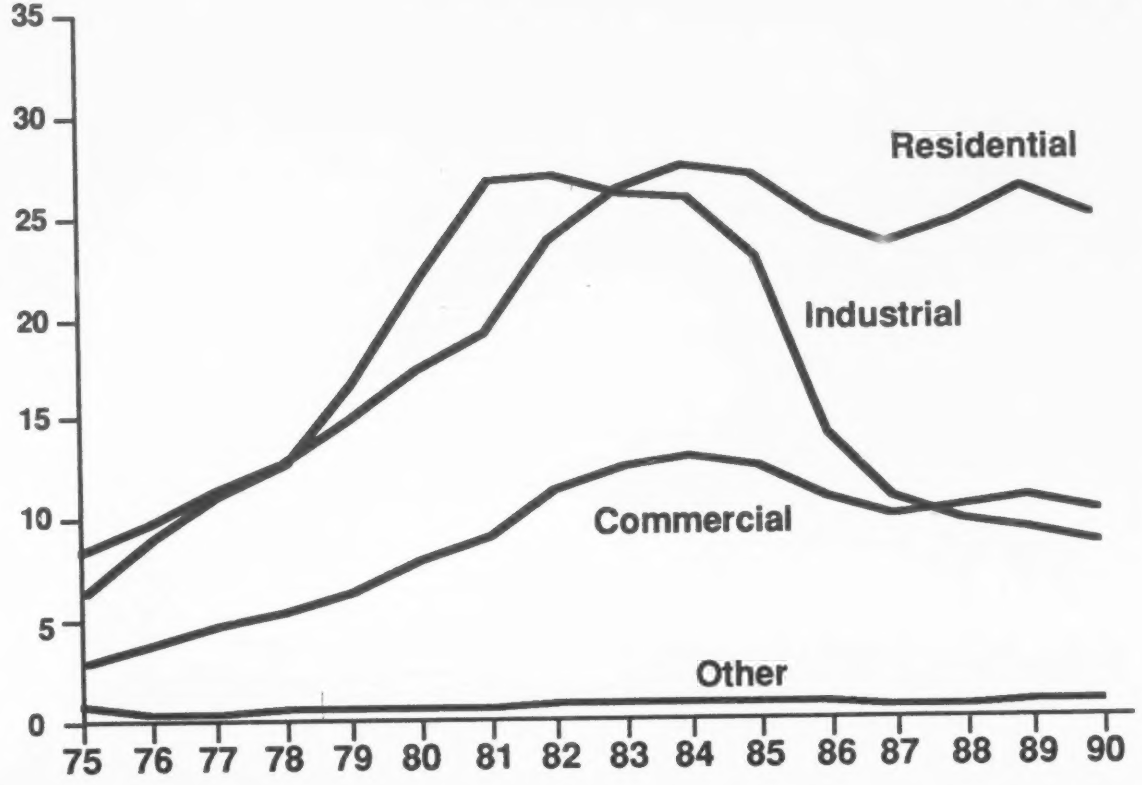
a. Less than 0.05 trillion Btu.

b. These groups are considered as commercial by the gas industry, but are repeated here because some companies still classify a portion of them as industrial.

c. Includes the quantities for electric generation detailed as "Transfers" which are not included in Total Industrial and Electric Generation sales of companies reporting this table or in Total Gas Utility Industry sales. Such quantities represent transfers by the gas department to the electric department of combination gas and electric companies.

CHART 7-1

GAS UTILITY INDUSTRY REVENUES BY CLASS OF SERVICE
(BILLIONS OF DOLLARS)



REFERENCE: TABLE 7-1

REVENUES

TABLE 7-1
GAS UTILITY INDUSTRY REVENUES, BY CLASS OF SERVICE, 1967-1990

(Thousands)

Year	Total	Residential	Commercial	Industrial[a]	Other[a]
1967	$ 8,260,739	$ 4,382,837	$ 1,223,897	$ 2,460,885	$193,120
1968	8,781,152	4,567,307	1,315,409	2,675,261	223,175
1969	9,479,566	4,883,029	1,459,054	2,918,973	218,510
1970	10,282,611	5,207,335	1,620,446	3,181,206	273,624
1971	11,357,392	5,635,395	1,829,309	3,568,582	324,106
1972	12,465,235	6,094,171	2,063,803	3,943,011	364,250
1973	12,987,272	6,246,988	2,172,460	4,196,714	371,110
1974	15,242,481	6,899,395	2,539,300	5,391,139	412,647
1975	19,101,498	8,445,484	3,302,669	6,745,171	608,174
1976	23,701,211	9,941,013	4,075,009	9,434,751	250,438
1977	28,303,200	11,540,805	4,979,890	11,454,675	327,830
1978	32,149,921	12,938,865	5,695,666	13,138,576	376,814
1979	38,947,143	14,832,950	6,623,766	17,044,820	445,607
1980	48,302,986	17,432,094	8,183,432	22,239,982	447,478
1981	56,109,859	19,180,238	9,285,549	27,123,865	520,207
1982	63,199,775	23,699,899	11,666,099	27,200,015	633,762
1983	65,836,669	26,173,122	12,658,718	26,314,873	689,956
1984	67,496,298	27,484,877	13,205,106	26,093,776	712,539
1985	63,292,552	26,864,099	12,722,134	23,085,833	620,486
1986	51,200,810	24,759,281	11,273,843	14,494,725	672,961
1987	45,491,823	23,622,262	10,271,485	11,068,424	529,652
1988	46,161,619	24,828,402	10,681,487	10,113,245	538,485
1989R	47,493,381	26,171,772	11,074,360	9,665,710	581,539
1990	45,173,901	25,013,880	10,609,970	8,996,743	553,308

a. Prior to 1976 "Other" electric generation (refer to Table 7-8) is included in the "Other" class of service. For 1976 and beyond all electric generation is included in the Industrial category.

R–Revised.

TABLE 7-2
GAS UTILITY INDUSTRY REVENUES, BY QUARTER AND CLASS OF SERVICE
1975-1990

(Thousands)

Year and Quarter	Total	Residential	Commercial	Industrial[a]	Other[a]
1975					
First	$ 6,192,706	$ 3,303,345	$ 1,241,301	$ 1,507,088	$ 140,972
Second	4,449,583	1,972,484	734,977	1,625,673	116,449
Third	3,396,905	987,079	438,873	1,783,838	187,115
Fourth	5,062,304	2,182,576	887,518	1,828,572	163,638
1980					
First	16,451,183	7,338,136	3,246,038	5,698,318	168,691
Second	10,079,782	3,383,415	1,567,534	5,045,581	83,252
Third	8,578,869	1,785,894	1,036,782	5,690,536	65,657
Fourth	13,193,152	4,924,649	2,333,078	5,805,547	129,878
1982					
First	22,716,502	10,471,317	4,812,798	7,199,859	232,528
Second	13,208,177	4,427,895	2,205,520	6,459,704	115,058
Third	10,788,316	2,372,937	1,455,682	6,868,834	90,863
Fourth	16,486,780	6,427,750	3,192,099	6,671,618	195,313
1983					
First	23,039,000	10,804,224	5,020,783	6,950,292	263,701
Second	14,587,145	5,598,036	2,665,010	6,176,141	147,958
Third	10,920,330	2,597,847	1,544,337	6,682,247	95,899
Fourth	17,290,194	7,173,015	3,428,588	6,506,193	182,398
1984					
First	25,546,562	12,465,689	5,734,074	7,050,372	296,427
Second	14,279,409	5,321,699	2,579,755	6,245,386	132,569
Third	10,848,608	2,687,920	1,553,057	6,523,808	83,823
Fourth	16,821,719	7,009,569	3,338,220	6,274,210	199,720
1985					
First	24,901,945	12,459,204	5,675,345	6,517,019	268,377
Second	12,186,443	4,597,373	2,221,153	5,255,653	112,264
Third	9,790,920	2,658,158	1,468,241	5,591,635	72,886
Fourth	16,413,244	7,149,364	3,375,395	5,721,526	166,959
1986					
First	21,148,759	11,158,610	5,043,862	4,709,532	236,755
Second	9,938,670	4,385,310	1,991,030	3,404,542	157,788
Third	7,048,578	2,541,541	1,271,234	3,133,258	102,545
Fourth	13,064,803	6,673,820	2,967,717	3,247,393	175,873
1987					
First	17,935,993	10,321,003	4,365,609	3,038,548	210,833
Second	8,869,975	4,297,368	1,883,296	2,589,672	99,639
Third	6,453,192	2,469,925	1,207,333	2,704,286	71,648
Fourth	12,232,663	6,533,966	2,815,247	2,735,918	147,532
1988					
First	18,899,116	11,036,793	4,673,645	2,959,952	228,726
Second	8,363,074	4,295,351	1,856,494	2,118,607	92,622
Third	6,372,234	2,474,983	1,195,658	2,645,835	55,758
Fourth	12,527,195	7,021,275	2,955,690	2,388,851	161,379
1989[R]					
First	18,659,001	11,204,648	4,648,133	2,592,213	214,007
Second	8,577,845	4,514,070	1,942,035	2,015,033	106,707
Third	6,389,446	2,646,433	1,231,401	2,427,560	84,052
Fourth	13,867,089	7,806,621	3,252,791	2,630,904	176,773
1990					
First	17,651,304	10,564,809	4,425,792	2,445,371	215,332
Second	8,494,564	4,574,153	1,955,827	1,863,646	100,938
Third	6,170,634	2,607,068	1,227,817	2,262,919	72,830
Fourth	12,857,399	7,267,850	3,000,534	2,424,807	164,208

a. Prior to 1976 "Other" electric generation (see Table 7-8) is included in the "Other" class of service. For 1976 and beyond all electric generation is included in the Industrial category.

R–Revised.

REVENUES

TABLE 7-3
GAS UTILITY INDUSTRY REVENUES, BY STATE
1975-1990[a]

(Thousands)

Division and State	1975	1980	1985	1987	1988	1989	1990
United States	**$19,101,498**	**$48,302,986**	**$63,292,552**	**$45,491,823**	**$46,161,619**	**$47,493,381**	**$45,173,901**
New England	**700,071**	**1,479,112**	**2,289,149**	**2,042,294**	**2,014,872**	**2,289,200**	**2,371,723**
Connecticut	178,480	366,348	572,431	539,908	537,687	581,681	611,334
Maine	5,983	11,156	19,318	17,630	18,497	21,541	26,183
Massachusetts	425,411	905,414	1,388,928	1,199,713	1,179,609	1,371,466	1,390,782
New Hampshire	17,190	40,569	71,173	72,095	70,422	94,345	103,443
Rhode Island	65,982	132,190	207,349	185,820	181,814	189,637	205,802
Vermont	7,025	23,435	29,950	27,128	26,843	30,530	34,179
Middle Atlantic	**2,940,846**	**6,603,468**	**9,466,303**	**7,782,705**	**7,725,311**	**8,303,016**	**8,010,522**
New Jersey	594,560	1,408,766	2,144,776	1,918,489	1,905,860	2,107,888	1,946,936
New York	1,248,149	2,663,655	4,198,569	3,384,776	3,353,780	3,643,381	3,647,473
Pennsylvania	1,098,137	2,531,047	3,122,958	2,479,440	2,465,671	2,551,747	2,416,113
East North Central	**5,033,327**	**11,584,266**	**15,254,866**	**10,238,710**	**10,758,952**	**11,037,604**	**9,817,766**
Illinois	1,504,405	3,588,046	4,546,146	3,043,150	3,008,532	3,120,482	2,870,658
Indiana	530,454	1,341,428	1,881,958	1,191,948	1,283,693	1,375,695	1,275,455
Michigan	1,269,106	2,602,792	3,779,438	2,384,851	2,552,746	2,557,720	2,197,694
Ohio	1,254,154	2,875,396	3,413,729	2,560,097	2,722,822	2,793,853	2,362,422
Wisconsin	475,208	1,176,604	1,633,595	1,058,664	1,191,168	1,189,854	1,111,537
West North Central	**1,585,864**	**3,778,158**	**5,272,430**	**3,500,864**	**3,825,454**	**3,748,283**	**3,538,598**
Iowa	311,364	718,370	998,934	608,321	676,035	667,565	613,422
Kansas	282,119	815,547	937,324	614,154	589,278	542,567	538,781
Minnesota	352,170	750,995	1,277,197	817,895	965,884	988,917	916,674
Missouri	406,752	992,492	1,277,040	944,110	1,007,152	980,129	933,854
Nebraska	169,010	356,352	536,737	345,545	398,986	388,285	365,223
North Dakota	31,037	77,168	119,167	89,004	93,152	85,690	78,796
South Dakota	33,412	67,234	126,031	81,835	94,586	95,130	91,848
South Atlantic	**1,538,752**	**4,112,603**	**5,787,396**	**5,089,378**	**4,762,307**	**4,989,394**	**4,791,077**
Delaware	33,229	78,336	124,740	99,525	98,197	106,782	101,249
District of Columbia	54,671	120,837	205,515	190,082	192,861	205,123	204,050
Florida	146,526	611,114	910,783	869,499	726,315	879,084	734,001
Georgia	349,550	950,915	1,436,103	1,178,030	1,149,412	1,042,922	1,091,467
Maryland	272,830	598,324	780,472	703,257	677,215	734,717	699,965
North Carolina	165,659	495,459	670,080	636,263	599,563	624,915	565,113
South Carolina	130,662	354,351	480,164	446,707	413,043	418,628	421,731
Virginia	206,109	482,080	736,868	609,650	606,728	672,269	632,831
West Virginia	179,516	421,187	442,671	356,365	298,973	304,954	340,670
East South Central	**775,705**	**2,306,090**	**2,846,738**	**2,026,877**	**2,114,742**	**2,036,260**	**1,948,024**
Alabama	237,710	698,762	860,907	606,982	627,180	539,890	542,008
Kentucky	199,738	509,455	694,725	472,809	504,361	518,960	462,656
Mississippi	134,730	517,786	554,370	359,621	349,068	330,926	298,757
Tennessee	203,527	580,087	736,736	587,465	634,133	646,484	644,603
West South Central	**2,953,148**	**8,951,915**	**9,062,862**	**5,756,099**	**5,846,384**	**5,665,556**	**5,446,851**
Arkansas	175,862	408,334	559,821	368,823	494,033	398,439	358,376
Louisiana	386,609	1,215,482	1,118,878	802,200	723,593	781,145	754,054
Oklahoma	328,817	965,728	982,583	542,880	572,143	642,968	632,842
Texas	2,061,860	6,362,371	6,401,580	4,042,196	4,056,615	3,843,004	3,701,579
Mountain	**920,668**	**2,393,490**	**3,050,419**	**2,114,856**	**2,159,187**	**2,252,709**	**2,159,991**
Arizona	171,773	384,777	573,729	344,289	370,420	443,244	380,157
Colorado	241,901	713,628	907,835	716,491	705,499	719,176	698,556
Idaho	75,818	182,600	171,432	93,628	82,404	78,362	75,200
Montana	82,021	163,917	204,292	136,492	148,707	157,929	151,127
Nevada	79,858	196,982	226,256	144,845	174,833	163,852	171,155
New Mexico	125,617	333,855	351,053	236,634	240,724	252,826	256,334
Utah	101,164	284,725	453,012	341,011	336,274	335,816	328,029
Wyoming	42,516	133,006	162,810	101,466	100,326	101,504	99,433
Pacific	**2,653,117**	**7,093,884**	**10,262,389**	**6,940,040**	**6,954,410**	**7,171,359**	**7,089,349**
Alaska	24,829	38,725	95,581	100,243	111,419	120,090	127,714
California	2,193,048	6,076,193	8,969,857	6,005,674	6,012,064	6,220,526	6,158,481
Hawaii	24,125	45,162	44,305	38,556	38,023	38,876	42,813
Oregon	156,703	354,502	432,989	318,050	294,644	268,661	281,840
Washington	254,412	579,302	719,657	477,517	498,260	523,206	478,501

a. Excludes revenues from sales for resale.

TABLE 7-4
GAS UTILITY INDUSTRY REVENUES FROM GAS FOR RESALE, BY STATE, 1975-1990

(Thousands)

Division and State	1975	1980	1985	1987	1988	1989	1990
United States	**$11,573,752**	**$37,900,088**	**$39,772,658**	**$21,471,367**	**$20,061,156**	**$17,277,914**	**$14,105,108**
New England	**382,550**	**851,449**	**1,196,319**	**954,706**	**776,176**	**756,898**	**656,991**
Connecticut	125,226	222,022	276,241	215,774	202,599	197,059	162,408
Maine	0	0	0	0	0	0	0
Massachusetts	216,069	529,965	770,323	517,855	474,382	458,342	409,888
New Hampshire	5,744	17,577	33,292	134,663	16,734	16,497	16,443
Rhode Island	34,645	81,885	116,463	86,414	82,461	85,000	68,252
Vermont	866	0	0	0	0	0	0
Middle Atlantic	**1,761,307**	**5,815,523**	**6,604,685**	**4,006,322**	**3,676,625**	**3,242,938**	**2,839,950**
New Jersey	365,302	1,250,773	1,500,354	1,106,387	982,324	866,174	707,220
New York	532,961	1,829,091	2,273,815	1,239,036	1,015,390	950,377	976,334
Pennsylvania	863,044	2,735,659	2,830,516	1,660,899	1,678,911	1,426,387	1,156,396
East North Central	**3,596,246**	**10,687,835**	**11,510,873**	**5,545,810**	**5,689,484**	**4,405,350**	**3,423,496**
Illinois	1,041,633	3,412,478	4,020,673	1,685,208	1,885,126	1,764,662	1,498,712
Indiana	292,665	988,871	1,310,034	869,433	737,141	700,045	617,558
Michigan	659,019	1,804,423	1,471,009	618,345	614,846	539,610	358,387
Ohio	1,144,706	3,145,106	3,199,641	1,681,530	1,820,153	785,065	507,352
Wisconsin	458,223	1,336,957	1,509,516	691,294	632,218	615,968	441,487
West North Central	**803,046**	**2,198,971**	**3,285,293**	**2,048,626**	**1,947,074**	**1,745,975**	**1,322,387**
Iowa	202,852	517,052	613,404	319,608	330,685	270,385	194,923
Kansas	89,538	265,146	380,686	273,894	232,536	223,306	191,157
Minnesota	178,677	554,425	885,481	526,978	485,169	409,231	312,779
Missouri	231,990	628,970	941,573	619,817	585,755	569,164	434,863
Nebraska	77,384	174,217	292,336	195,386	194,474	174,019	113,223
North Dakota	7,695	22,277	72,384	52,486	54,090	42,226	39,496
South Dakota	14,910	36,884	99,429	60,457	64,365	57,644	35,946
South Atlantic	**1,094,146**	**3,580,787**	**3,882,772**	**2,225,417**	**1,937,252**	**1,851,915**	**1,197,247**
Delaware	1,170	2,180	8,041	4,728	4,913	30,075	10,640
District of Columbia	0	0	0	0	0	0	0
Florida	54,786	218,749	304,365	264,062	235,377	251,792	228,379
Georgia	217,592	709,353	1,091,463	594,545	503,389	442,169	383,294
Maryland	159,003	480,609	484,449	287,755	254,897	254,300	52,418
North Carolina	96,134	440,145	520,029	354,161	232,592	118,202	128,358
South Carolina	86,854	313,732	344,559	222,254	179,537	241,157	146,806
Virginia	177,878	542,737	722,299	277,214	254,175	237,122	143,849
West Virginia	300,729	873,282	407,567	220,698	272,372	277,098	103,503
East South Central	**752,002**	**2,695,523**	**2,882,411**	**1,467,379**	**1,461,697**	**1,060,541**	**814,651**
Alabama	140,282	495,051	670,921	291,796	268,049	229,349	161,762
Kentucky	169,609	528,686	609,693	322,134	330,548	217,275	182,859
Mississippi	163,268	632,103	490,749	211,720	150,479	131,151	92,340
Tennessee	278,843	1,039,683	1,111,048	641,729	712,621	482,766	377,690
West South Central	**765,273**	**4,313,620**	**2,836,863**	**1,584,040**	**1,531,389**	**1,490,883**	**1,364,704**
Arkansas	9,328	25,469	37,353	51,994	28,523	21,401	14,265
Louisiana	354,067	1,383,886	966,312	361,223	318,302	527,045	473,682
Oklahoma	91,809	422,361	190,649	51,533	38,440	57,610	65,801
Texas	310,069	2,481,904	1,642,549	1,119,290	1,146,124	884,827	810,956
Mountain	**1,349,007**	**4,434,173**	**5,270,940**	**2,144,611**	**1,748,176**	**1,482,424**	**1,270,487**
Arizona	935,305	3,093,184	3,685,562	1,176,118	929,911	692,803	558,442
Colorado	163,200	657,917	706,735	507,308	448,023	435,650	400,358
Idaho	96,221	228,724	184,861	99,425	45,438	17,304	4,078
Montana	7,289	25,957	72,458	47,777	48,526	45,189	42,667
Nevada	12,147	36,042	51,030	37,359	38,538	38,326	28,916
New Mexico	34,447	111,849	112,829	33,296	27,732	40,367	28,600
Utah	3,113	15,333	277,426	189,308	169,475	180,592	177,618
Wyoming	97,285	265,167	180,039	54,020	40,533	32,193	29,808
Pacific	**1,070,175**	**3,322,207**	**2,302,502**	**1,494,456**	**1,293,283**	**1,240,990**	**1,215,200**
Alaska	0	22,677	0	0	0	0	0
California	294,546	1,199,764	572,465	387,666	265,616	268,474	214,592
Hawaii	0	0	0	0	0	0	0
Oregon	598,295	1,665,022	1,264,807	753,600	853,683	857,177	902,446
Washington	177,334	434,744	465,230	225,752	173,984	115,339	98,162

TABLE 7-5
GAS UTILITY INDUSTRY REVENUES, BY STATE AND CLASS OF SERVICE, 1990

(Thousands)

Division and State	Total	Class of Service Residential	Commercial	Industrial	Electric Generation	Other
United States	**$45,173,901**	**$25,013,880**	**$10,609,970**	**$6,034,227**	**$2,962,516**	**$553,308**
New England	**2,371,723**	**1,309,407**	**646,796**	**290,637**	**106,652**	**18,231**
Connecticut	611,334	332,844	168,655	103,613	5,759	463
Maine	26,183	4,929	11,277	9,977	0	0
Massachusetts	1,390,782	772,239	372,227	134,147	99,184	12,985
New Hampshire	103,443	50,412	35,714	14,235	0	3,082
Rhode Island	205,802	134,870	50,547	19,698	27	660
Vermont	34,179	14,113	8,376	8,967	1,682	1,041
Middle Atlantic	**8,010,522**	**5,196,091**	**1,858,286**	**708,791**	**73,608**	**173,746**
New Jersey	1,946,936	1,127,708	578,730	208,624	30,796	1,078
New York	3,647,473	2,490,773	738,135	246,361	41,319	130,885
Pennsylvania	2,416,113	1,577,610	541,421	253,806	1,493	41,783
East North Central	**9,817,766**	**6,678,395**	**2,212,795**	**879,807**	**12,635**	**34,134**
Illinois	2,870,658	2,045,583	601,108	217,198	6,455	314
Indiana	1,275,455	786,857	302,599	178,841	1,443	5,715
Michigan	2,197,694	1,572,134	503,958	120,190	698	714
Ohio	2,362,422	1,622,424	559,153	154,039	1,609	25,197
Wisconsin	1,111,537	651,397	245,977	209,539	2,430	2,194
West North Central	**3,538,598**	**2,065,838**	**1,076,497**	**374,823**	**12,324**	**9,116**
Iowa	613,422	347,310	168,611	89,750	6,166	1,585
Kansas	538,781	318,804	178,852	39,567	1,058	500
Minnesota	916,674	501,552	268,294	141,539	2,813	2,476
Missouri	933,854	610,342	273,468	45,120	890	4,034
Nebraska	365,223	193,335	125,926	44,111	1,333	518
North Dakota	78,796	43,180	33,594	1,965	54	3
South Dakota	91,848	51,315	27,752	12,771	10	0
South Atlantic	**4,791,077**	**2,207,557**	**1,231,718**	**1,001,938**	**338,878**	**10,986**
Delaware	101,249	44,535	20,694	32,980	2,935	105
District of Columbia	204,050	94,387	109,663	0	0	0
Florida	734,001	100,648	164,004	167,904	299,585	1,860
Georgia	1,091,467	635,690	258,155	190,253	5,505	1,864
Maryland	699,965	415,536	166,460	95,509	22,313	147
North Carolina	565,113	219,666	131,280	212,870	991	306
South Carolina	421,731	128,171	87,606	201,901	2,888	1,165
Virginia	632,831	332,845	209,558	83,873	1,643	4,912
West Virginia	340,670	236,079	84,298	16,648	3,018	627
East South Central	**1,948,024**	**942,604**	**497,135**	**467,829**	**3,047**	**37,409**
Alabama	542,008	301,657	119,753	115,292	2,551	2,755
Kentucky	462,656	275,696	117,301	51,744	0	17,915
Mississippi	298,757	135,253	59,832	89,124	373	14,175
Tennessee	644,603	229,998	200,249	211,669	123	2,564
West South Central	**5,446,851**	**1,948,267**	**905,915**	**1,147,174**	**1,229,408**	**216,087**
Arkansas	358,376	190,380	97,983	69,022	0	991
Louisiana	754,054	323,506	107,990	157,028	30,338	135,192
Oklahoma	632,842	312,528	129,894	183,466	4,704	2,250
Texas	3,701,579	1,121,853	570,048	737,658	1,194,366	77,654
Mountain	**2,159,991**	**1,283,889**	**680,203**	**127,210**	**25,574**	**43,115**
Arizona	380,157	193,251	119,367	34,632	18,613	14,294
Colorado	698,556	423,712	255,836	17,096	922	990
Idaho	75,200	41,965	25,915	7,310	0	10
Montana	151,127	78,317	47,897	20,011	71	4,831
Nevada	171,155	97,785	64,045	3,498	4,373	1,454
New Mexico	256,334	162,919	61,133	10,306	1,008	20,968
Utah	328,029	230,521	70,148	27,054	167	139
Wyoming	99,433	55,419	35,862	7,303	420	429
Pacific	**7,089,349**	**3,381,832**	**1,500,625**	**1,036,018**	**1,160,390**	**10,484**
Alaska	127,714	53,435	39,381	0	34,898	0
California	6,158,481	2,969,573	1,196,036	858,392	1,125,361	9,119
Hawaii	42,813	9,647	17,956	15,210	0	0
Oregon	281,840	146,915	97,458	37,437	30	0
Washington	478,501	202,262	149,794	124,979	101	1,365

TABLE 7-6
GAS UTILITY INDUSTRY FIRM AND INTERRUPTIBLE GAS REVENUES, BY STATE, 1990

(Thousands)

	Commercial			Industrial[a]		
Division and State	Total	Firm	Interruptible	Total	Firm	Interruptible
United States	**$10,609,970**	**$9,508,807**	**$1,101,163**	**$6,034,227**	**$2,824,023**	**$3,210,204**
New England	**646,796**	**608,784**	**38,012**	**290,637**	**169,173**	**121,464**
Connecticut	168,655	145,641	23,014	103,613	55,997	47,616
Maine	11,277	11,277	0	9,977	4,757	5,220
Massachusetts	372,227	362,372	9,855	134,147	84,956	49,191
New Hampshire	35,714	35,473	241	14,235	7,817	6,418
Rhode Island	50,547	45,645	4,902	19,698	15,385	4,313
Vermont	8,376	8,376	0	8,967	261	8,706
Middle Atlantic	**1,858,286**	**1,743,633**	**114,653**	**708,791**	**435,314**	**273,477**
New Jersey	578,730	499,905	78,825	208,624	107,960	100,664
New York	738,135	723,640	14,495	246,361	165,777	80,584
Pennsylvania	541,421	520,088	21,333	253,806	161,577	92,229
East North Central	**2,212,795**	**2,173,403**	**39,392**	**879,807**	**695,799**	**184,008**
Illinois	601,108	595,339	5,769	217,198	183,674	33,524
Indiana	302,599	290,686	11,913	178,841	129,440	49,401
Michigan	503,958	503,933	25	120,190	113,358	6,832
Ohio	559,153	556,902	2,251	154,039	139,135	14,904
Wisconsin	245,977	226,543	19,434	209,539	130,192	79,347
West North Central	**1,076,497**	**993,225**	**83,272**	**374,823**	**174,856**	**199,967**
Iowa	168,611	148,755	19,856	89,750	58,550	31,200
Kansas	178,852	166,868	11,984	39,567	14,992	24,575
Minnesota	268,294	244,609	23,685	141,539	46,769	94,770
Missouri	273,468	259,681	13,787	45,120	32,892	12,228
Nebraska	125,926	115,582	10,344	44,111	15,359	28,752
North Dakota	33,594	31,042	2,552	1,965	377	1,588
South Dakota	27,752	26,688	1,064	12,771	5,917	6,854
South Atlantic	**1,231,718**	**1,096,372**	**135,346**	**1,001,938**	**415,004**	**586,934**
Delaware	20,694	20,694	0	32,980	19,232	13,748
District of Columbia	109,663	74,717	34,946	0	0	0
Florida	164,004	158,518	5,486	167,904	9,643	158,261
Georgia	258,155	256,904	1,251	190,253	77,487	112,766
Maryland	166,460	129,748	36,712	95,509	70,178	25,331
North Carolina	131,280	123,981	7,299	212,870	99,901	112,969
South Carolina	87,606	74,285	13,321	201,901	79,848	122,053
Virginia	209,558	176,933	32,625	83,873	51,803	32,070
West Virginia	84,298	80,592	3,706	16,648	6,912	9,736
East South Central	**497,135**	**482,139**	**14,996**	**467,829**	**333,780**	**134,049**
Alabama	119,753	111,087	8,666	115,292	62,004	53,288
Kentucky	117,301	116,836	465	51,744	34,553	17,191
Mississippi	59,832	59,823	9	89,124	83,732	5,392
Tennessee	200,249	194,393	5,856	211,669	153,491	58,178
West South Central	**905,915**	**899,964**	**5,951**	**1,147,174**	**428,515**	**718,659**
Arkansas	97,983	97,944	39	69,022	30,447	38,575
Louisiana	107,990	107,512	478	157,028	111,761	45,267
Oklahoma	129,894	126,226	3,668	183,466	96,704	86,762
Texas	570,048	568,282	1,766	737,658	189,603	548,055
Mountain	**680,203**	**675,133**	**5,070**	**127,210**	**82,698**	**44,512**
Arizona	119,367	117,743	1,624	34,632	33,278	1,354
Colorado	255,836	253,836	2,000	17,096	5,378	11,718
Idaho	25,915	25,915	0	7,310	7,118	192
Montana	47,897	47,827	70	20,011	2,997	17,014
Nevada	64,045	59,874	0	3,498	3,498	0
New Mexico	61,133	64,045	1,259	10,306	10,271	35
Utah	70,148	70,148	0	27,054	17,821	9,233
Wyoming	35,862	35,745	117	7,303	2,337	4,966
Pacific	**1,500,625**	**836,154**	**664,471**	**1,036,018**	**88,884**	**947,134**
Alaska	39,381	39,381	0	0	0	0
California	1,196,036	561,543	634,493	858,392	14,586	843,806
Hawaii	17,956	15,531	2,425	15,210	15,210	0
Oregon	97,458	97,458	0	37,437	26,398	11,039
Washington	149,794	122,241	27,553	124,979	32,690	92,289

a. Does not include electric generation.

TABLE 7-7
REVENUES FROM GAS UTILITY INDUSTRY SALES, BY TYPE OF INDUSTRY CLASSIFICATION, 1970–1987

(Thousands)

Industry Classification	1970	1975	1980	1985	1986	1987
Agriculture, forestry and fisheries	$ 13,373	$ 41,816	$ 137,952	$ 208,390	$ 144,398	$ 75,258
Petroleum and natural gas production	29,116	67,556	90,824	229,276	129,144	108,474
Other mining	18,744	44,664	214,732	111,223	64,831	19,978
Electric services[a]	750,879	1,482,516	6,750,928	8,693,019	4,691,501	4,718,438
Other transportation, communication, and public utilities	36,820	99,971	276,149	408,828	282,094	235,304
Hotels, rooming houses, and camps	34,089	85,216	97,974	193,306	191,491	161,354
Laundries, cleaning and dyeing	12,508	30,095	76,146	164,781	163,630	130,185
Other services	82,737	274,992	1,025,544	1,892,707	1,654,918	1,228,223
Other non-manufacturing	105,186	228,982	571,193	1,624,996	1,684,049	1,382,687
Ordnance	14,216	b	b	b	b	b
Food and kindred products	140,016	352,172	991,498	1,135,245	757,839	441,980
Textile products, apparel, fabrics, etc.	32,563	58,468	191,077	270,267	230,524	224,037
Furniture, lumber, and other wood products	25,097	65,210	166,086	163,813	112,523	88,952
Paper and allied products	137,086	258,795	760,852	791,030	451,292	317,650
Carbon black	12,613	26,646	65,844	9,976	5,704	2,691
Chemicals and allied products (except carbon black)	303,261	821,397	2,158,091	2,051,301	1,180,781	496,062
Petroleum refining	167,312	502,402	1,333,883	488,352	205,352	79,076
Rubber and miscellaneous plastic products	20,483	47,694	164,015	197,481	134,337	95,453
Glass products	92,362	183,233	524,302	429,443	290,355	144,339
Cement	81,001	130,210	135,038	35,363	20,929	11,614
Clay products, pottery, etc.	63,707	111,670	250,795	254,079	173,573	109,189
Other stone products and miscellaneous	61,841	103,389	277,604	223,292	162,286	89,138
Primary iron and steel industries	313,595	568,959	1,533,627	1,123,360	659,932	273,711
Primary non-ferrous industries	89,949	268,145	768,053	562,798	339,375	197,780
Fabricated metal products, machinery equipment and supplies	162,290	319,800	729,513	957,537	761,588	473,310
Transportation equipment	92,514	194,678	286,168	404,121	279,699	178,956
Other manufacturing	45,777	129,238	377,918	613,265	546,350	262,359
Public Administration	c	74,956	227,343	450,563	410,924	355,300
Unclassified[d]	608,138	4,377,080	13,597,472	13,951,654	11,440,134	10,884,073
Total Gas Utility Industry Commercial, Industrial and "Other" revenues[a,e]	**$ 3,547,273**	**$10,949,950**	**$38,143,276**	**$37,639,466**	**$27,169,553**	**$22,785,571**
Total Commercial, Industrial and "Other" revenues of co.'s reporting this table	**$ 3,028,083**	**$ 9,473,153**	**$28,759,666**	**$26,851,517**	**$19,420,096**	**$13,639,932**
Transfers[a]	**$ 92,443**	**$ 293,936**	**$ 1,157,694**	**$ 1,210,334**	**$ 728,024**	**$ 914,829**

a. Includes "revenues" detailed as transfers of gas for electric generation which are not included in Total Commercial, Industrial and "Other" revenues of companies reporting this table or in Total Gas Utility Industry revenues. Such "revenues" represent credits by the electric department to the gas department of combination gas and electric companies.

b. Classification eliminated.

c. New classification in 1972.

d. Difference between total and classified revenues.

e. Includes Industrial and "Other" sales only prior to 1971.

Note: Prior to 1982 only large volume sales detailed by SIC. After 1987, revenue data by SIC no longer collected.

TABLE 7-8
GAS UTILITY INDUSTRY REVENUES FROM GAS USED FOR ELECTRIC GENERATION, 1967-1990[a]

(Thousands)

	Revenue					
	Industrial[b]					
Year	Firm	Interruptible	Other	Total Revenue	Credits[c]	Total Revenue and Credits
1967	$ 346,912		$ 96,643	$ 443,555	$ 75,298	$ 518,853
1968	380,995		117,159	498,154	80,816	578,970
1969	426,325		112,454	538,779	71,747	610,526
1970	520,882		137,553	658,435	92,443	750,878
1971	$ 237,111	$ 335,539	160,035	732,685	201,213	933,898
1972	277,344	294,885	201,865	774,094	193,655	967,749
1973	185,106	309,653	214,419	709,178	197,418	906,596
1974	271,516	395,889	225,124	892,529	269,148	1,161,677
1975	352,660	473,951	361,969	1,188,580	293,936	1,482,516
1976	594,784	1,075,885	d	1,670,669	315,935	1,986,604
1977	779,919	1,535,133	d	2,315,052	379,274	2,694,326
1978	953,406	1,452,434	d	2,405,840	330,572	2,736,412
1979	1,424,871	2,063,626	d	3,488,497	721,948	4,210,445
1980	2,411,369	3,181,089	d	5,592,458	1,157,694	6,750,152
1981	3,042,009	4,285,518	d	7,327,527	1,213,333	8,540,860
1982	3,075,361	4,832,346	d	7,907,707	1,321,944	9,229,651
1983	2,486,220	4,253,117	d	6,739,337	1,351,422	8,090,759
1984	2,536,993	4,852,280	d	7,389,273	1,481,561	8,870,834
1985	2,857,907	4,569,758	d	7,427,665	1,210,334	8,637,999
1986	1,805,826	2,143,185	d	3,949,011	728,024	4,677,035
1987	1,281,135	2,508,207	d	3,789,342	914,829	4,704,171
1988	1,090,680	2,309,596	d	3,400,276	761,842	4,162,118
1989	1,053,056	2,395,911	d	3,448,967	871,342	4,320,309
1990	1,056,566	1,905,950	d	2,962,516	930,490	3,893,006

a. Excludes revenues from direct sales by producers to straight electric utilities.

b. No breakdown available prior to 1971.

c. Represents "Revenues" from transfers of gas for electric generation. Such "Revenues" are credits by the electric department to the gas department of combination gas and electric companies.

d. Other now included with Industrial to conform to the definition of industrial services.

TABLE 7-9
GAS UTILITY INDUSTRY REVENUES, GAS USED FOR ELECTRIC GENERATION, BY STATE, 1990[a]

(Thousands)

Division and State	Industrial Revenue				Total Revenue and Credits
	Firm	Interruptible	Total	Credits[b]	
United States	**$1,056,566**	**$1,905,850**	**$2,962,516**	**$930,490**	**$3,893,006**
New England	**58**	**106,594**	**106,652**	**0**	**106,652**
Connecticut	58	5,701	5,759	0	5,759
Maine	0	0	0	0	0
Massachusetts	0	99,184	99,184	0	99,184
New Hampshire	0	0	0	0	0
Rhode Island	0	27	27	0	27
Vermont	0	1,682	1,682	0	1,682
Middle Atlantic	**5,582**	**68,026**	**73,608**	**575,742**	**649,350**
New Jersey	3,536	27,260	30,796	76,058	106,854
New York	856	40,463	41,319	499,684	541,003
Pennsylvania	1,190	303	1,493	0	1,493
East North Central	**7,164**	**5,471**	**12,635**	**5,055**	**17,690**
Illinois	2,536	3,919	6,455	169	6,624
Indiana	1,443	0	1,443	4,886	6,329
Michigan	573	125	698	0	698
Ohio	993	616	1,609	0	1,609
Wisconsin	1,619	811	2,430	0	2,430
West North Central	**4,632**	**7,692**	**12,324**	**7,546**	**19,870**
Iowa	1,719	4,447	6,166	972	7,138
Kansas	781	277	1,058	94	1,152
Minnesota	1,574	1,239	2,813	1,444	4,257
Missouri	413	477	890	4,980	5,870
Nebraska	145	1,188	1,333	1	1,334
North Dakota	0	54	54	0	54
South Dakota	0	10	10	55	65
South Atlantic	**8,283**	**330,495**	**338,878**	**48,486**	**387,364**
Delaware	235	2,600	2,935	14,069	17,004
District of Columbia	0	0	0	0	0
Florida	8,048	291,537	299,585	0	299,585
Georgia	0	5,505	5,505	0	5,505
Maryland	0	22,313	22,313	22,974	45,287
North Carolina	0	991	991	0	991
South Carolina	0	2,888	2,888	11,443	14,331
Virginia	0	1,643	1,643	0	1,643
West Virginia	0	3,018	3,018	0	3,018
East South Central	**1,820**	**1,227**	**3,047**	**95**	**3,142**
Alabama	1,586	965	2,551	0	2,551
Kentucky	0	0	0	95	95
Mississippi	234	139	373	0	373
Tennessee	0	123	123	0	123
West South Central	**917,972**	**311,436**	**1,229,408**	**261,667**	**1,491,075**
Arkansas	0	0	0	0	0
Louisiana	2,159	28,179	30,338	44,771	75,109
Oklahoma	3,569	1,135	4,704	141,830	146,534
Texas	912,244	282,122	1,194,366	75,066	1,269,432
Mountain	**24,457**	**1,117**	**25,574**	**31,899**	**57,473**
Arizona	18,486	127	18,613	0	18,613
Colorado	170	752	922	4,811	5,733
Idaho	0	0	0	0	0
Montana	0	71	71	374	445
Nevada	4,373	0	4,373	26,714	31,087
New Mexico	1,008	0	1,008	0	1,008
Utah	0	167	167	0	167
Wyoming	420	0	420	0	420
Pacific	**86,598**	**1,073,792**	**1,160,390**	**0**	**1,160,390**
Alaska	34,898	0	34,898	0	34,898
California	51,599	1,073,762	1,125,361	0	1,125,361
Hawaii	0	0	0	0	0
Oregon	0	30	30	0	30
Washington	101	0	101	0	101

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a. Excludes revenues from direct sales by producers to electric utilities.

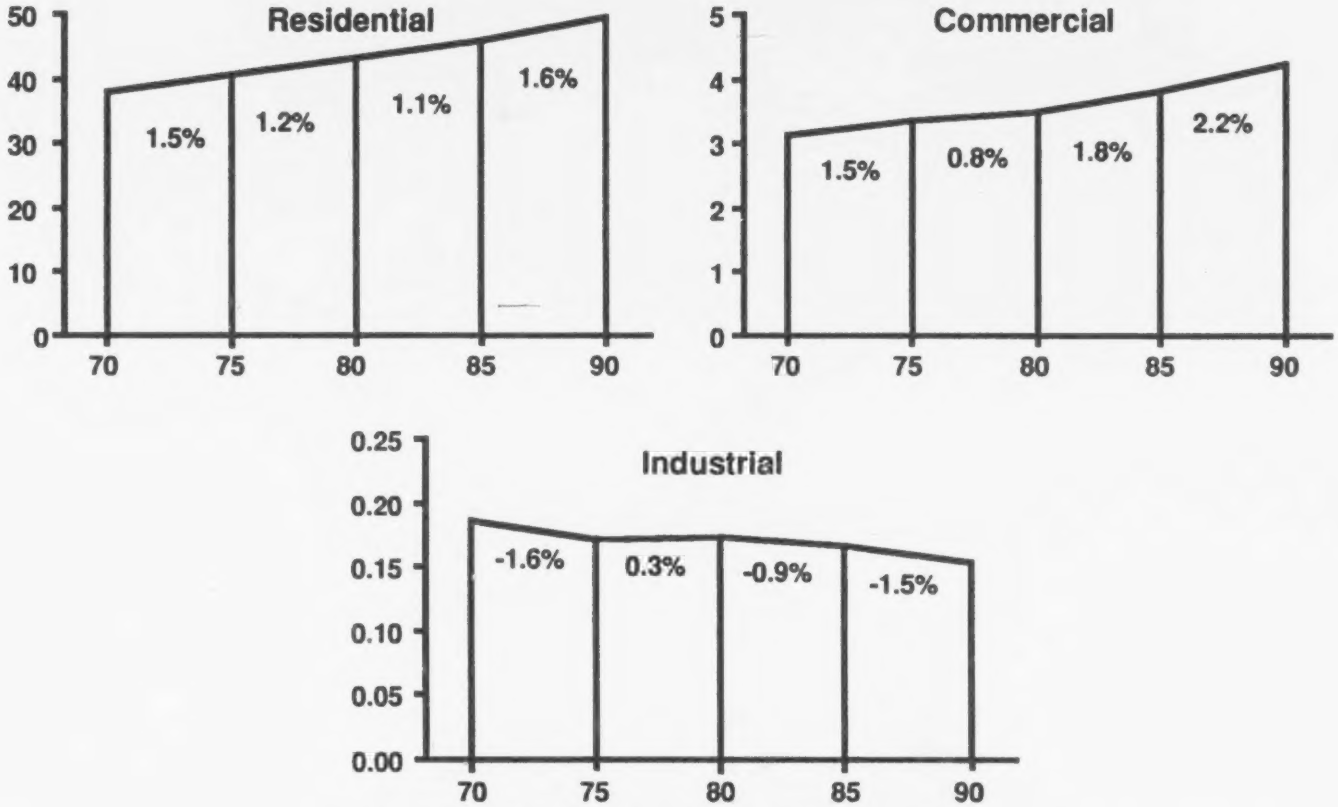
b. Represents "Revenues" from transfers of gas for electric generation. Such "Revenues" are credits by the electric department to the gas department of combination gas and electric companies.

SECTION 8
CUSTOMERS

	Average Customers	
	1990	% Change 90/89
Gas Utility Industry		
(Thousands)		
Total	54,292.6	+ 1.8
Residential	49,830.2	+ 1.7
Commercial	4,248.5	+ 2.1
Industrial	166.0	− 1.0
Other	47.9	+ 1.5

CHART 8-1

GAS UTILITY INDUSTRY CUSTOMERS
(MILLIONS)



% Equals Compound Annual Growth Rates

REFERENCE: TABLE 8-1

CUSTOMERS

TABLE 8-1
GAS UTILITY INDUSTRY CUSTOMERS, BY CLASS OF SERVICE, YEARLY AVERAGES, 1967-1990

(Thousands)

Year	Total	Residential	Commercial	Industrial[a]	Other[a]
1967	39,076.5	35,915.1	2,933.6	181.2	46.6
1968	39,930.0	36,691.1	3,003.6	188.1	47.2
1969	40,854.0	37,538.3	3,073.8	192.7	49.2
1970	41,482.1	38,097.0	3,130.9	199.1	55.1
1971	42,241.9	38,788.7	3,199.0	204.7	49.5
1972	42,954.8	39,428.0	3,263.6	209.2	54.1
1973	43,711.2	40,115.5	3,331.4	209.1	55.2
1974	44,267.2	40,626.7	3,392.0	193.8	54.7
1975	44,554.5	40,950.3	3,366.9	183.5	53.8
1976	44,941.4	41,337.6	3,371.5	179.7	52.6
1977	45,274.0	41,682.4	3,371.0	173.3	47.3
1978	45,788.9	42,183.2	3,369.8[b]	189.2[b]	46.7
1979	46,478.3	42,821.3	3,422.8	189.4	44.8
1980	47,222.9	43,489.3	3,497.8	187.2	48.5
1981	47,947.5	44,149.4	3,564.5	187.2	46.5
1982	48,414.9	44,552.3	3,631.1	186.1	45.4
1983	48,799.2	44,893.8	3,676.3	182.2	46.8
1984	49,324.6	45,366.9	3,730.3	180.2	47.2
1985	49,970.7	45,928.7	3,815.7	179.0	47.3
1986	50,704.3	46,583.2	3,891.5[c]	177.6	52.0
1987	51,575.8	47,362.5	3,979.7	180.0	53.6
1988	52,421.5	48,132.6	4,069.2	167.6	52.1
1989	53,356.0	48,980.5	4,160.6	167.7	47.2
1990	54,292.6	49,830.2	4,248.5	166.0	47.9

a. Prior to 1976, "Other" electric generation customers included in the "Other" class of service. For 1976 and beyond all electric generation customers included in the Industrial category.

b. Reclassification of customers from commercial to industrial.

c. Reclassification of customers from commercial to other.

CUSTOMERS

TABLE 8-2
GAS UTILITY INDUSTRY AVERAGE CUSTOMERS, BY QUARTER, 1975-1990

(Thousands)

Year and Quarter	Total	Residential	Commercial	Industrial[a]	Other[a]
1975					
First	44,762	41,099	3,406	194	63
Second	44,386	40,806	3,348	181	51
Third	44,233	40,686	3,322	177	48
Fourth	44,839	41,210	3,393	182	54
1980					
First	47,365	43,579	3,549	188	49
Second	47,197	43,452	3,509	187	49
Third	46,879	43,218	3,427	186	48
Fourth	47,450	43,708	3,506	187	49
1981					
First	48,159	44,315	3,609	188	47
Second	47,942	44,140	3,567	188	47
Third	47,573	43,839	3,503	186	45
Fourth	48,116	44,303	3,580	186	47
1982					
First	48,723	44,803	3,687	188	45
Second	48,429	44,558	3,638	187	46
Third	47,990	44,197	3,564	184	45
Fourth	48,517	44,650	3,636	185	46
1983					
First	49,089	45,127	3,731	184	47
Second	48,813	44,900	3,683	183	47
Third	48,348	44,512	3,609	181	46
Fourth	48,946	45,035	3,683	181	47
1984					
First	49,587	45,585	3,773	181	48
Second	49,322	45,363	3,732	180	47
Third	48,896	45,004	3,666	179	47
Fourth	49,494	45,516	3,751	180	47
1985					
First	50,244	46,147	3,868	181	48
Second	49,917	45,876	3,814	180	47
Third	49,567	45,595	3,747	178	47
Fourth	50,158	46,099	3,834	178	47
1987					
First	51,752	47,488	4,028	182	54
Second	51,603	47,374	3,995	181	53
Third	51,163	47,025	3,907	178	53
Fourth	51,786	47,564	3,989	179	54
1988					
First	52,601	48,259	4,119	169	54
Second	52,369	48,078	4,069	168	54
Third	52,035	47,817	4,000	167	51
Fourth	52,680	48,375	4,088	168	49
1989					
First	53,490	49,071	4,204	168	47
Second	53,321	48,941	4,166	168	46
Third	53,030	48,720	4,097	166	47
Fourth	53,583	49,190	4,177	168	48
1990					
First	54,414	49,910	4,288	168	48
Second	54,247	49,783	4,250	166	48
Third	53,970	49,570	4,188	164	48
Fourth	54,539	50,058	4,269	165	47

a. Prior to 1976, "Other" electric generation customers included in the "Other" class of service. For 1976 and beyond all electric generation customers included in the Industrial category.

TABLE 8-3
GAS UTILITY INDUSTRY AVERAGE CUSTOMERS, BY STATE, 1975-1990[a]

(Thousands)

Division and State	1975	1980	1985	1987	1988	1989	1990
United States	**44,554.5**	**47,222.9**	**49,970.7**	**51,578.8**	**52,421.5**	**53,356.0**	**54,292.6**
New England	**1,692.5**	**1,734.6**	**1,839.3**	**1,922.9**	**1,971.4**	**2,018.4**	**2,045.0**
Connecticut	392.5	405.0	433.0	452.2	462.1	471.9	476.0
Maine	18.1	15.0	15.2	15.5	15.7	16.1	16.3
Massachusetts	1,055.4	1,079.3	1,130.3	1,172.5	1,197.5	1,216.9	1,229.6
New Hampshire	45.4	50.9	57.9	67.8	72.0	82.9	84.9
Rhode Island	164.6	168.9	184.8	194.3	201.1	207.3	213.3
Vermont	16.6	15.4	18.0	20.7	23.0	23.3	24.9
Middle Atlantic	**8,230.3**	**8,111.4**	**8,362.7**	**8,558.1**	**8,673.1**	**8,787.6**	**8,899.5**
New Jersey	1,815.1	1,849.1	1,955.2	2,059.2	2,114.8	2,162.5	2,199.1
New York	4,102.5	3,925.5	4,023.5	4,080.6	4,117.6	4,155.8	4,202.0
Pennsylvania	2,312.7	2,336.8	2,384.0	2,418.3	2,440.7	2,469.3	2,498.4
East North Central	**10,253.1**	**10,775.6**	**11,118.9**	**11,441.8**	**11,618.7**	**11,816.0**	**12,001.5**
Illinois	3,134.2	3,304.2	3,355.8	3,429.3	3,467.5	3,506.5	3,548.4
Indiana	1,187.7	1,241.1	1,310.0	1,362.0	1,390.8	1,420.9	1,448.7
Michigan	2,234.5	2,443.3	2,550.9	2,638.2	2,682.5	2,732.6	2,779.0
Ohio	2,757.8	2,746.5	2,794.1	2,859.2	2,900.3	2,950.5	2,991.0
Wisconsin	939.0	1,040.5	1,108.1	1,153.1	1,177.6	1,205.5	1,234.4
West North Central	**3,820.4**	**4,126.5**	**4,373.4**	**4,513.0**	**4,573.4**	**4,641.9**	**4,705.5**
Iowa	691.6	745.4	764.2	767.9	773.7	781.3	789.6
Kansas	669.8	723.0	787.3	804.6	812.9	825.1	835.2
Minnesota	726.8	809.4	909.8	983.0	1,006.1	1,032.6	1,061.7
Missouri	1,167.1	1,218.4	1,241.0	1,275.8	1,293.6	1,308.6	1,317.0
Nebraska	400.5	442.4	466.3	473.2	476.0	480.7	484.8
North Dakota	71.3	85.7	94.6	95.6	96.3	97.2	98.4
South Dakota	93.1	102.4	110.1	112.9	114.8	116.4	118.8
South Atlantic	**3,861.9**	**4,042.2**	**4,404.6**	**4,626.9**	**4,751.2**	**4,869.0**	**5,013.6**
Delaware	82.8	81.5	85.2	89.2	91.1	93.7	96.6
District of Columbia	155.4	148.6	145.3	145.4	146.1	146.1	147.2
Florida	391.8	433.0	460.5	469.6	472.3	473.8	480.0
Georgia	912.3	1,025.9	1,195.6	1,297.3	1,344.5	1,381.7	1,412.3
Maryland	774.6	773.5	803.0	815.6	822.6	828.9	836.6
North Carolina	338.0	366.7	444.5	489.4	520.7	550.6	583.0
South Carolina	283.1	296.2	319.3	333.4	347.2	360.2	373.7
Virginia	528.4	523.2	563.8	604.0	625.2	652.6	679.8
West Virginia	395.4	393.6	387.3	382.9	381.5	381.4	404.4
East South Central	**2,139.2**	**2,211.6**	**2,285.7**	**2,352.1**	**2,404.7**	**2,450.8**	**2,513.2**
Alabama	637.1	679.0	688.4	700.1	709.1	710.6	732.5
Kentucky	631.3	626.7	643.7	654.7	665.2	675.6	684.2
Mississippi	380.3	396.7	403.7	405.8	407.8	410.4	413.2
Tennessee	490.5	509.3	549.4	591.5	622.6	654.2	683.3
West South Central	**5,092.0**	**5,509.8**	**5,847.6**	**5,853.1**	**5,834.3**	**5,856.0**	**5,876.7**
Arkansas	461.4	489.9	530.9	541.0	547.7	554.4	552.5
Louisiana	935.9	1,002.3	995.8	982.7	984.8	978.5	972.6
Oklahoma	740.5	816.4	902.8	886.7	886.7	890.2	896.5
Texas	2,954.2	3,201.2	3,418.1	3,442.8	3,415.1	3,432.9	3,455.1
Mountain	**2,311.6**	**2,700.3**	**3,041.1**	**3,140.8**	**3,190.8**	**3,255.1**	**3,336.0**
Arizona	554.1	579.1	595.4	600.1	605.5	610.5	617.7
Colorado	688.8	850.1	1,011.1	1,049.9	1,063.0	1,077.3	1,099.3
Idaho	107.5	108.6	116.9	122.1	125.3	129.2	136.2
Montana	173.4	182.7	189.1	190.0	193.3	196.1	199.3
Nevada	112.2	168.2	201.2	225.5	389.6	396.8	277.5
New Mexico	278.9	327.6	367.1	381.9	239.7	257.1	404.5
Utah	297.4	361.0	432.8	447.1	451.5	465.4	478.6
Wyoming	99.2	122.9	127.5	124.1	122.9	122.7	122.9
Pacific	**7,153.5**	**8,010.8**	**8,697.9**	**9,167.0**	**9,403.9**	**9,661.2**	**9,901.6**
Alaska	29.1	42.1	72.2	78.2	79.3	80.4	81.8
California	6,495.1	7,286.3	7,888.0	8,302.4	8,503.6	8,721.1	8,908.5
Hawaii	34.8	33.2	32.8	33.7	34.0	34.2	34.3
Oregon	248.2	275.3	303.6	320.7	332.8	346.7	364.3
Washington	346.3	373.9	401.3	432.0	454.2	478.8	512.7

a. Excludes customers purchasing for resale.

CUSTOMERS

TABLE 8-4
GAS UTILITY INDUSTRY CUSTOMERS, BY STATE AND CLASS OF SERVICE, AVERAGES, 1990

(Thousands)

		Class of Service				
Division and State	Total	Residential	Commercial	Industrial	Electric Generation	Other
United States	**54,292.6**	**49,830.2**	**4,248.5**	**165.6**	**0.4**	**47.9**
New England	**2,045.0**	**1,849.6**	**181.9**	**9.1**	**a**	**4.5**
Connecticut	476.0	428.0	44.9	3.0	a	0.1
Maine	16.3	12.0	4.3	0.1	0.0	0.0
Massachusetts	1,229.6	1,120.4	101.2	4.5	a	3.5
New Hampshire	84.9	73.1	10.9	0.4	0.0	0.0
Rhode Island	213.3	194.7	17.6	1.1	0.0	a
Vermont	24.9	21.4	3.0	a	a	0.5
Middle Atlantic	**8,899.5**	**8,181.7**	**682.2**	**23.4**	**a**	**12.1**
New Jersey	2,199.1	1,977.1	216.1	5.8	a	a
New York	4,202.0	3,892.8	286.5	12.3	a	10.3
Pennsylvania	2,498.4	2,311.8	179.6	5.2	a	1.8
East North Central	**12,001.5**	**11,020.4**	**926.5**	**50.5**	**0.1**	**4.0**
Illinois	3,548.4	3,250.2	278.8	18.6	0.1	0.7
Indiana	1,448.7	1,319.5	122.6	5.9	a	0.7
Michigan	2,779.0	2,573.2	195.2	10.6	a	0.0
Ohio	2,991.0	2,755.4	225.9	7.1	a	2.6
Wisconsin	1,234.4	1,122.1	104.0	8.3	a	a
West North Central	**4,[illegible]5.5**	**4,236.4**	**455.6**	**11.9**	**0.2**	**1.5**
Iowa	[illegible]9.6	704.9	82.6	1.7	0.1	0.3
Kansas	835.2	747.0	84.1	3.9	0.1	0.2
Minnesota	1,061.7	961.2	96.4	3.8	a	0.2
Missouri	1,317.0	1,210.3	105.4	0.7	a	0.6
Nebraska	484.8	422.3	61.1	1.2	a	0.2
North Dakota	98.4	85.6	12.7	0.1	a	0.0
South Dakota	118.8	105.1	13.3	0.5	a	0.0
South Atlantic	**5,013.6**	**4,558.6**	**434.4**	**15.9**	**0.1**	**4.7**
Delaware	96.6	88.9	7.5	0.2	a	a
District of Columbia	147.2	132.5	14.7	0.0	0.0	0.0
Florida	480.0	436.5	42.8	0.4	0.1	0.2
Georgia	1,412.3	1,303.1	103.4	2.9	a	2.9
Maryland	836.6	770.6	60.5	5.5	a	a
North Carolina	583.0	513.4	66.7	2.9	a	0.1
South Carolina	373.7	332.8	39.2	1.3	a	0.4
Virginia	679.8	611.1	65.2	2.5	a	1.0
West Virginia	404.4	369.7	34.4	0.2	a	0.1
East South Central	**2,513.2**	**2,258.0**	**239.1**	**6.7**	**a**	**9.4**
Alabama	732.5	673.0	54.3	2.2	a	3.1
Kentucky	684.2	618.1	63.3	1.3	0.0	1.4
Mississippi	413.2	371.3	38.9	1.0	a	2.0
Tennessee	683.3	595.6	82.6	2.2	0.0	2.9
West South Central	**5,876.7**	**5,382.4**	**477.7**	**8.3**	**a**	**8.3**
Arkansas	552.5	489.3	61.9	1.2	0.0	a
Louisiana	972.6	909.7	60.5	1.0	a	1.4
Oklahoma	896.5	809.1	84.3	2.5	a	0.6
Texas	3,455.1	3,174.3	271.0	3.6	a	6.3
Mountain	**3,336.0**	**3,024.6**	**303.4**	**4.6**	**a**	**3.2**
Arizona	617.7	571.4	45.1	0.5	a	0.6
Colorado	1,099.3	985.5	113.0	0.7	a	0.1
Idaho	136.2	116.9	19.0	0.3	0.0	a
Montana	199.3	175.5	23.3	0.5	a	a
Nevada	277.5	256.6	20.8	0.1	a	a
New Mexico	404.5	365.4	34.8	1.9	a	2.4
Utah	478.6	443.8	34.2	0.5	a	a
Wyoming	122.9	109.5	13.2	0.1	a	0.1
Pacific	**9,901.6**	**9,318.5**	**547.7**	**35.2**	**a**	**0.2**
Alaska	81.8	70.0	11.7	0.0	a	0.0
California	8,908.5	8,448.7	430.4	29.3	a	0.1
Hawaii	34.3	30.7	1.8	1.8	0.0	0.0
Oregon	364.3	317.5	46.3	0.5	a	0.0
Washington	512.7	451.6	57.5	3.5	a	0.1

a. Less than 0.05 thousand.

TABLE 8-5
GAS UTILITY INDUSTRY HOUSEHEATING CUSTOMERS, BY STATE, YEARLY AVERAGES FOR 1986–1990

(Thousands)

	1986	1987	1988	1989	1990	
Division and State					Number	Saturation
United States	**41,347.0**	**41,839.3**	**42,338.9**	**43,102.8**	**43,850.5**	**88.0**
New England	**1,193.7**	**1,218.0**	**1,263.0**	**1,302.1**	**1,319.4**	**71.3**
Connecticut	264.9	276.4	287.4	289.2	292.3	68.3
Maine	12.1	5.0	5.1	783.9	5.3	44.9
Massachusetts	730.4	741.1	763.2	8.1	794.0	70.9
New Hampshire	41.5	48.3	52.3	60.6	61.9	84.7
Rhode Island	130.1	131.5	137.5	142.4	146.7	75.4
Vermont	14.7	15.7	17.5	17.9	19.2	90.0
Middle Atlantic	**5,016.9**	**5,168.4**	**5,315.3**	**5,373.3**	**5,425.5**	**66.3**
New Jersey	1,244.2	1,283.3	1,331.2	1,365.5	1,383.0	70.3
New York	1,835.9	1,931.7	2,003.7	1,996.7	2,014.3	51.9
Pennsylvania	1,936.8	1,953.4	1,980.4	2,011.1	2,028.2	88.0
East North Central	**9,817.0**	**9,957.6**	**10,126.3**	**10,302.4**	**10,465.4**	**95.0**
Illinois	2,796.7	2,816.1	2,848.7	2,868.0	2,903.9	89.4
Indiana	1,155.0	1,205.3	1,232.3	1,250.2	1,274.4	96.7
Michigan	2,331.8	2,372.9	2,420.4	2,492.4	2,536.0	98.6
Ohio	2,567.8	2,593.6	2,630.9	2,673.2	2,708.3	98.4
Wisconsin	965.7	969.7	994.0	1,018.6	1,042.8	93.0
West North Central	**3,894.6**	**3,968.5**	**4,019.9**	**4,075.6**	**4,126.5**	**97.5**
Iowa	665.8	662.6	664.5	668.3	676.0	95.9
Kansas	702.2	713.9	724.8	732.6	741.1	99.3
Minnesota	808.9	849.8	869.5	896.3	922.0	96.0
Missouri	1,140.3	1,159.8	1,177.6	1,188.8	1,192.3	98.6
Nebraska	400.6	404.8	406.3	409.2	412.9	97.9
North Dakota	79.6	79.5	80.0	80.0	80.6	94.6
South Dakota	97.2	98.1	97.2	100.4	101.6	97.1
South Atlantic	**3,706.5**	**3,765.1**	**3,674.4**	**3,464.4**	**3,555.6**	**78.4**
Delaware	59.5	60.5	62.7	67.1	67.5	75.9
District of Columbia	100.4	101.1	102.5	106.3	104.9	79.2
Florida	339.2	342.0	356.7	366.3	362.7	83.1
Georgia	1,136.2	1,176.0	1,219.4	1,277.5	1,277.1	98.0
Maryland	608.7	612.0	619.7	641.4	632.7	82.1
North Carolina	393.5	398.9	443.2	332.1	341.9	66.6
South Carolina	269.0	265.7	273.3	c	c	c
Virginia	467.8	488.2	472.0	546.5	556.7	91.1
West Virginia	332.2	320.7	124.9	127.3	132.0	35.7
East South Central	**2,022.1**	**2,060.1**	**2,030.7**	**1,894.0**	**1,947.1**	**86.2**
Alabama	626.8	613.5	584.4	622.6	642.0	95.4
Kentucky	562.1	585.4	583.5	590.0	597.7	96.7
Mississippi	358.9	364.5	340.7	140.2	141.0	38.0
Tennessee	474.3	496.7	522.1	541.2	566.4	95.1
West South Central	**4,965.4**	**4,910.4**	**4,734.5**	**5,047.4**	**5,071.8**	**94.3**
Arkansas	380.3	391.0	438.4	445.7	444.2	90.9
Louisiana	880.5	857.1	671.7	872.9	868.9	95.6
Oklahoma	780.0	768.3	779.9	779.8	786.7	97.3
Texas	2,924.4	2,894.0	2,844.5	2,949.0	2,972.0	93.7
Mountain	**2,693.5**	**2,711.4**	**2,756.6**	**2,719.5**	**2,789.2**	**92.3**
Arizona	471.3	467.3	472.7	480.8	483.2	84.6
Colorado	933.4	939.8	951.8	970.9	984.0	99.9
Idaho	99.0	103.9	105.0	109.8	114.6	98.3
Montana	166.7	167.5	159.7	74.1	74.2	42.3
Nevada	170.3	181.2	192.6	308.1	218.9	85.4
New Mexico	337.3	326.4	351.1	237.1	365.2	100.0
Utah	403.3	415.3	418.3	432.1	443.6	100.0
Wyoming	112.2	110.0	105.4	106.6	105.5	96.6
Pacific	**8,037.3**	**8,079.8**	**8,418.2**	**8,924.1**	**9,150.0**	**98.3**
Alaska	65.2	66.9	67.9	68.8	c	c
California	7,401.1	7,403.6	7,711.4	8,182.4	8,347.3	98.8
Hawaii	0.0	0.0	0.0	0.0	0.0	0.0[b]
Oregon	249.6	255.6	265.6	277.1	290.4	91.5
Washington	321.4	353.7	373.3	395.8	424.0	93.9

a. Percentages refer to proportion of residential gas customers using gas for heating.
b. 1987 saturation percentages.
c. Not Available.
Source: A.G.A. *Residential Gas Market Survey: 1990.* Data represent average number of customers developed from number of year-end customers as shown in survey.

SECTION 9
PRICES

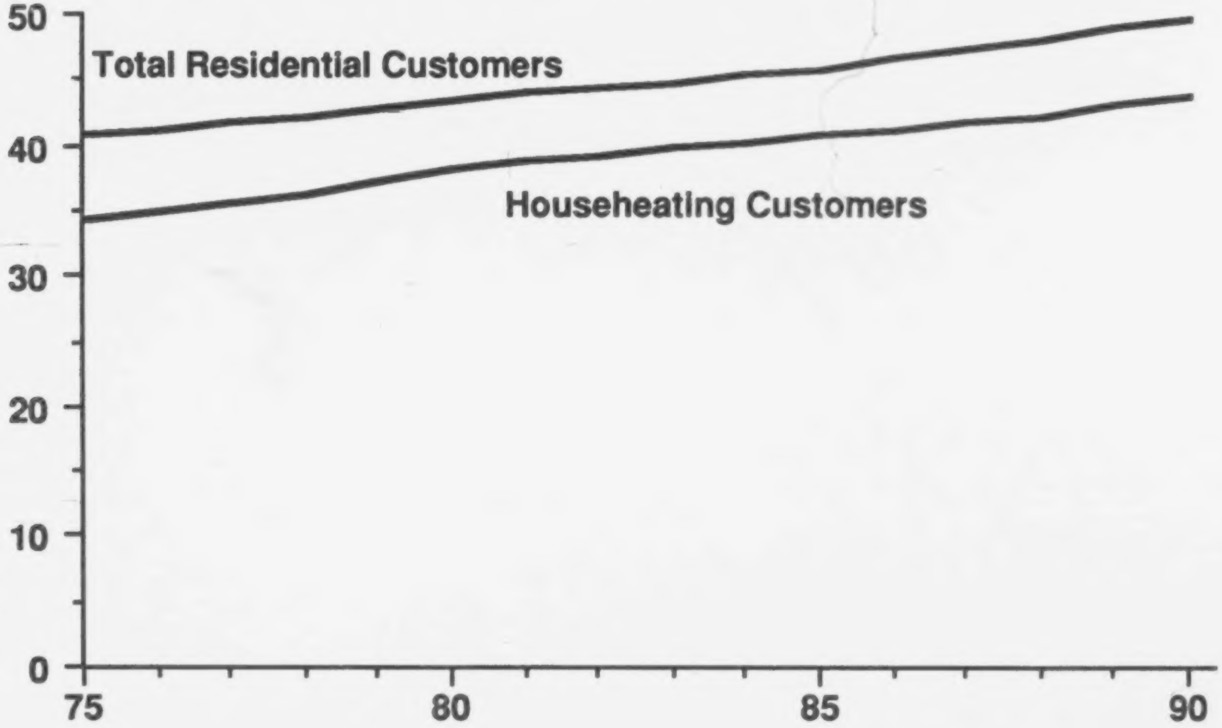
	1990	% Change 90/89*
Gas Utility Industry		
($/MMBtu)		
Total	$ 4.59	+ 2.0
Residential	5.59	+ 2.6
Commercial	4.84	+ 1.5
Industrial	2.99	+ 0.3
Other	3.24	+ 4.5
Wellhead ($/Mcf)	1.72	+ 0.6
City Gate	3.54	+ 2.6
Electric (Residential)	22.92	+ 2.2
Number 2 Fuel Oil	7.84	+22.5

*Percentage change based on unrounded data for both years. Percentage change for wellhead price based on preliminary data for both years.

Prices in this section, unless cited as a source other than A.G.A., were developed using the following methodology. Total revenues for a specific segment and time period are divided by the corresponding total sales for that specific segment and time period. For example, the residential price (average 1990) for the state of New York was obtained by dividing total 1990 residential revenues in New York by the total 1990 residential sales in New York. Likewise, the residential price (average 1990) for the total United States was obtained by dividing total 1990 residential revenues in the United States by the total 1990 residential sales in the United States.

CHART 8-2

GAS UTILITY HOUSEHEATING CUSTOMERS
(MILLIONS)



REFERENCE: TABLE 8-6

TABLE 8-6
GAS UTILITY INDUSTRY HOUSEHEATING CUSTOMERS AND HEATING SATURATIONS[a] BY CENSUS DIVISION, 1975–1990 YEARLY AVERAGES

(Thousands)

Census Division	1975		1980		1984		1985	
	Customers	Percent	Customers	Percent	Customers	Percent	Customers	Percent
United States	**34,372**	**84.1**	**38,184**	**87.8**	**40,037**	**88.3**	**40,781**	**88.8**
New England	857	54.8	1,010	63.1	1,113	67.1	1,138	67.6
Middle Atlantic	4,128	54.1	4,522	60.0	4,910	63.9	5,011	64.8
East North Central	8,432	89.4	9,169	92.1	9,584	94.2	9,671	94.4
West North Central	3,261	94.5	3,592	96.3	3,720	95.3	3,753	95.3
South Atlantic	2,970	84.2	3,315	89.4	3,588	90.8	3,626	90.1
East South Central	1,868	96.5	1,967	98.5	2,002	97.8	2,008	97.6
West South Central	4,496	97.1	4,999	99.5	5,107	96.2	4,983	93.4
Mountain	2,040	98.0	2,407	98.2	2,661	99.3	2,649	96.2
Pacific	6,320	94.6	7,203	95.8	7,352	92.2	7,942	97.4

Census Division	1987		1988		1989		1990	
	Customers	Percent	Customers	Percent	Customers	Percent	Customers	Percent
United States	**41,839**	**88.3**	**42,339**	**88.0**	**43,851**	**88.0**	**43,851**	**88.0**
New England	1,218	69.5	1,263	70.5	1,302	71.3	1,319	71.3
Middle Atlantic	5,168	65.5	5,315	66.5	5,373	66.5	5,426	66.3
East North Central	9,958	94.6	10,126	94.8	10,303	95.0	10,465	95.0
West North Central	3,969	97.6	4,020	97.5	4,076	97.5	4,127	97.5
South Atlantic	3,765	89.3	3,674	85.0	3,464	78.3	3,556	78.4
East South Central	2,060	97.5	2,031	94.0	1,894	86.1	1,947	86.2
West South Central	4,910	92.0	4,735	89.0	5,047	94.3	5,072	94.3
Mountain	2,711	95.4	2,757	95.5	2,720	92.3	2,789	92.3
Pacific	8,419	95.2	8,419	95.2	8,924	98.3	9,150	98.3

a. Percentages refer to proportion of total residential customers, within specified areas, using gas for heating.

Source: *A.G.A. Residential Gas Market Survey: 1990.* Data represent average number of customers developed from number of year-end customers as shown in survey.

TABLE 9-1
AVERAGE WELLHEAD PRICES OF NATURAL GAS, BY STATE, 1975–1989[a]

Division and State	1975	1980	1985	1986	1987	1988[R]	1989
United States	**46.5¢**	**158.8¢**	**251.1¢**	**194.2¢**	**166.5¢**	**169.3¢**	**169.5¢**
New England	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Middle Atlantic	**68.0**	**210.2**	**319.4**	**261.2**	**221.6**	**216.8**	**238.1**
New Jersey	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New York	74.0	194.9	337.0	339.3	200.0	230.0	220.0
Pennsylvania	67.5	212.7	315.6	250.0	225.0	215.0	240.0
East North Central	**66.6**	**217.6**	**329.2**	**314.7**	**288.6**	**284.0**	**284.6**
Illinois	70.0	190.0	277.0	257.1	224.0	218.8	215.0
Indiana	39.0	135.0	250.7	123.3	171.0	157.0	170.9
Michigan	63.4	235.5	360.0	360.0	324.0	317.9	315.6
Ohio	70.6	197.7	307.5	284.1	258.1	255.1	255.3
Wisconsin	0.0	0.0	0.0	0.0	0.0	0.0	0.0
West North Central	**17.5**	**79.5**	**135.9**	**123.8**	**118.2**	**141.9**	**146.9**
Iowa	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kansas	17.2	77.2	127.0	121.4	115.1	135.6	144.3
Minnesota	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Missouri	34.0	0.0	350.0	375.0	375.0	375.0	350.0
Nebraska	54.1	82.9	301.1	282.1	242.0	266.2	223.0
North Dakota	23.0	118.8	189.6	135.2	130.0	199.7	178.3
South Dakota	0.0	b	251.4	246.3	270.5	195.1	110.6
South Atlantic	**50.4**	**274.2**	**368.8**	**361.0**	**357.2**	**290.9**	**300.0**
Delaware	0.0	0.0	0.0	0.0	0.0	0.0	0.0
District of Columbia	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Florida	97.3	173.0	243.3	120.2	168.1	152.8	205.0
Georgia	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maryland	27.0	45.6	59.0	65.0	54.5	93.1	85.3
North Carolina	0.0	0.0	0.0	0.0	0.0	0.0	0.0
South Carolina	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Virginia	51.5	285.0	302.0	245.0	208.0	208.0	219.0
West Virginia	36.9	300.0	385.0	390.0	385.0	305.0	311.0
East South Central	**59.3**	**223.2**	**316.0**	**231.4**	**227.5**	**232.7**	**232.1**
Alabama	87.0	318.6	371.1	289.2	296.8	265.3	272.2
Kentucky	54.0	89.3[c]	238.6	188.3	182.4	256.4	213.0
Mississippi	49.6	231.7	316.5	213.1	193.9	186.1	196.6
Tennessee	43.0	176.0	248.0	178.0	131.0	150.0	165.0
West South Central	**45.6**	**156.9**	**248.0**	**187.9**	**159.7**	**163.1**	**166.0**
Arkansas	34.7	69.6	255.0	251.4	229.1	194.1	240.9
Louisiana	42.3	160.7[c]	266.4	221.2	178.0	180.6	182.3
Oklahoma	32.0	150.7	247.3	170.8	146.6	154.5	158.7
Texas	51.9	156.5[d]	232.9	165.4	147.0	150.7	153.3
Mountain	**38.2**	**172.6**	**278.6**	**214.9**	**171.7**	**167.7**	**144.6**
Arizona	28.0	b	b	b	b	b	180.0
Colorado	48.0	147.0	289.9	205.0	176.0	159.0	152.0
Idaho	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Montana	43.3	145.4	239.0	205.0	180.0	170.0	154.6
Nevada	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New Mexico	40.5	175.8	261.8	187.0	166.0	170.1	156.4
Utah	48.0	111.7	351.5	289.6	188.0	239.0	158.0
Wyoming	33.7	192.0	300.6	252.0	176.0	152.7	123.6
Pacific	**56.7**	**210.7**	**232.5**	**194.4**	**171.4**	**181.5**	**182.0**
Alaska	30.2	73.2	73.5	50.1	94.5	126.7	136.2
California	70.0	217.0	336.5	289.4	236.8	239.5	231.9
Hawaii	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oregon	0.0	240.0	240.2	200.0	144.7	160.0	140.0
Washington	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a. Reflects price at first point of transfer, representing sales made by producers. The 1989 U.S. average wellhead price of natural gas is estimated to be 171.0¢.

b. Not available.

c. Value data are for the period beginning June 1, 1980 and ending May 31, 1981.

d. Weighted average value obtained from separate onshore and OCS average value calculations.

Source: U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, 1989.

PRICES

TABLE 9-2
GAS UTILITY INDUSTRY AVERAGE PRICES BY CLASS OF SERVICE, 1967–1990

($/MMBtu)

Year	Total	Residential	Commercial	Industrial[a]	Other
1967	$0.61	$1.00	$0.78	$0.35	$0.36
1968	0.61	1.00	0.77	0.35	0.36
1969	0.62	1.01	0.78	0.36	0.39
1970	0.64	1.06	0.81	0.38	0.41
1971	0.68	1.12	0.85	0.41	0.38
1972	0.73	1.19	0.91	0.45	0.41
1973	0.79	1.25	0.95	0.50	0.44
1974	0.95	1.42	1.11	0.66	0.60
1975	1.29	1.69	1.38	0.99	0.94
1976	1.60	1.98	1.68	1.31	1.36
1977	1.97	2.33	2.07	1.69	1.74
1978	2.18	2.53	2.28	1.90	1.79
1979	2.52	2.92	2.66	2.23	1.94
1980	3.13	3.61	3.34	2.79	2.67
1981	3.65	4.16	3.91	3.29	3.46
1982	4.46	4.97	4.72	4.00	4.30
1983	5.12	5.88	5.51	4.41	4.92
1984	5.13	5.94	5.51	4.36	4.87
1985	5.02	5.95	5.44	4.10	4.79
1986	4.60	5.65	5.04	3.34	4.02
1987	4.32	5.39	4.77	2.88	3.43
1988	4.31	5.29	4.63	2.85	3.36
1989	4.50	5.45	4.77	2.98	3.10
1990	4.59	5.59	4.84	2.99	3.24

a. Includes Electric Generation.

TABLE 9-3
GAS UTILITY INDUSTRY AVERAGE PRICES, BY STATE, 1975–1990[a]

($/MMBtu)

Division and State	1975	1980	1985	1987	1988	1989	1990
United States	**$1.29**	**$3.13**	**$5.02**	**$4.32**	**$4.31**	**$4.50**	**$4.59**
New England	**2.87**	**4.96**	**6.57**	**5.52**	**5.62**	**5.72**	**6.10**
Connecticut	2.93	4.99	7.28	6.22	6.12	6.54	6.69
Maine	3.04	5.15	7.44	6.45	5.80	5.82	6.12
Massachusetts	2.91	4.96	6.29	5.20	5.42	5.36	5.83
New Hampshire	2.21	4.25	6.70	6.03	5.41	6.14	6.47
Rhode Island	2.82	5.00	6.78	5.73	5.82	6.36	6.56
Vermont	2.06	5.66	5.71	5.01	4.61	4.69	4.87
Middle Atlantic	**1.97**	**3.98**	**6.31**	**5.59**	**5.40**	**5.84**	**6.00**
New Jersey	2.31	4.36	6.41	5.45	5.23	5.52	5.49
New York	2.14	4.43	6.57	5.96	5.83	6.35	6.39
Pennsylvania	1.68	3.45	5.94	5.25	5.02	5.47	5.90
East North Central	**1.34**	**3.17**	**5.27**	**4.73**	**4.65**	**4.74**	**4.71**
Illinois	1.35	3.26	5.05	4.37	4.13	4.40	4.63
Indiana	1.16	2.82	4.72	4.46	4.64	4.95	4.87
Michigan	1.43	3.06	5.66	5.01	4.92	4.77	4.57
Ohio	1.35	3.24	5.47	4.91	4.85	4.96	4.81
Wisconsin	1.31	3.42	5.36	5.19	5.16	4.91	4.84
West North Central	**1.00**	**2.68**	**4.61**	**3.91**	**4.05**	**4.10**	**4.25**
Iowa	1.04	2.81	4.61	3.80	4.04	3.97	4.11
Kansas	0.69	2.24	3.77	3.64	3.63	3.84	4.02
Minnesota	1.19	2.81	5.09	3.78	4.06	4.06	4.09
Missouri	1.18	3.04	4.98	4.25	4.37	4.46	4.78
Nebraska	0.90	2.34	4.33	3.79	3.90	3.95	4.04
North Dakota	1.26	3.57	5.28	4.89	4.47	4.20	4.31
South Dakota	1.05	2.81	5.07	4.18	4.20	4.14	4.38
South Atlantic	**1.39**	**3.28**	**5.29**	**4.62**	**4.44**	**4.60**	**4.72**
Delaware	1.73	3.46	5.53	4.67	4.46	4.83	6.52
District of Columbia	2.21	4.38	7.35	6.13	5.92	6.30	4.65
Florida	1.15	2.63	3.91	3.39	2.92	3.12	3.31
Georgia	1.12	3.17	5.31	5.08	5.16	5.15	5.36
Maryland	1.97	3.87	6.59	5.58	5.25	5.50	5.44
North Carolina	1.58	3.46	5.35	4.74	4.57	4.78	4.34
South Carolina	1.10	3.16	5.08	4.45	4.43	4.49	4.41
Virginia	1.78	3.58	5.93	4.93	4.74	5.44	5.34
West Virginia	1.24	3.27	5.65	4.66	4.62	4.76	5.31
East South Central	**1.03**	**2.85**	**4.55**	**4.25**	**4.16**	**4.18**	**4.34**
Alabama	1.04	3.11	4.81	4.70	4.52	4.56	4.90
Kentucky	1.11	2.90	4.90	4.24	4.16	4.39	4.50
Mississippi	0.95	2.71	3.93	4.29	4.19	3.78	3.91
Tennessee	1.00	2.69	4.51	3.84	3.83	3.96	4.06
West South Central	**0.99**	**2.53**	**3.89**	**2.95**	**3.08**	**3.27**	**3.23**
Arkansas	0.80	1.97	3.92	4.06	4.17	4.31	4.25
Louisiana	0.85	2.36	3.92	3.13	3.53	3.45	3.57
Oklahoma	0.79	2.05	3.73	3.58	3.34	3.16	2.91
Texas	1.10	2.72	3.91	2.78	2.90	3.18	3.16
Mountain	**0.99**	**2.84**	**4.66**	**4.34**	**4.36**	**4.28**	**4.44**
Arizona	1.19	2.82	4.81	4.74	5.26	3.90	4.75
Colorado	0.90	2.95	4.74	4.35	4.07	4.34	4.24
Idaho	1.48	4.03	5.19	4.36	4.77	4.53	4.35
Montana	1.03	3.03	4.64	3.93	3.81	3.73	4.87
Nevada	1.30	3.17	5.46	4.61	4.96	4.84	4.81
New Mexico	0.88	2.66	4.70	4.04	4.37	4.95	4.83
Utah	0.85	2.34	4.00	4.23	4.16	4.30	4.48
Wyoming	0.70	2.45	4.28	4.36	4.11	4.18	4.34
Pacific	**1.31**	**3.65**	**5.08**	**4.08**	**4.12**	**4.32**	**4.52**
Alaska	0.81	1.20	2.24	2.51	2.76	3.00	3.19
California	1.26	3.57	5.09	4.10	4.10	4.36	4.61
Hawaii	6.78	13.01	14.20	11.90	11.62	11.48	12.30
Oregon	1.80	4.64	5.61	4.63	5.44	5.06	5.08
Washington	1.55	4.33	5.38	3.81	4.02	3.85	3.57

a. Excludes sales for resale and revenues from sales for resale.

PRICES

TABLE 9-4
GAS UTILITY INDUSTRY RESALE PRICES, BY STATE, 1975-1990[a]

($/MMBtu)

Division and State	1975	1980	1985	1987	1988	1989	1990
United States	**$0.80**	**$2.41**	**$3.82**	**$3.31**	**$3.24**	**$3.44**	**$3.54**
New England	**1.41**	**2.84**	**4.10**	**3.05**	**3.34**	**3.94**	**4.63**
Connecticut	1.51	2.91	4.11	3.14	3.41	3.98	4.60
Maine	b	b	b	b	b	b	b
Massachusetts	1.35	2.81	4.09	3.05	3.32	3.95	4.69
New Hampshire	0.99	2.59	4.38	2.90	3.13	3.79	4.86
Rhode Island	1.59	2.94	4.03	3.06	3.35	3.78	4.33
Vermont	0.67	b	b	b	b	b	b
Middle Atlantic	**0.93**	**2.49**	**3.95**	**3.25**	**3.29**	**3.82**	**3.88**
New Jersey	0.99	2.45	3.71	2.91	2.96	3.40	3.64
New York	0.93	2.59	4.02	3.42	3.58	4.07	4.17
Pennsylvania	0.90	2.45	4.04	3.39	3.34	3.95	3.82
East North Central	**0.79**	**2.41**	**3.91**	**4.24**	**3.71**	**3.61**	**3.84**
Illinois	0.68	2.12	3.51	3.98	3.29	3.44	3.81
Indiana	0.72	2.14	4.02	3.55	3.46	3.38	3.56
Michigan	0.87	2.93	4.46	7.83	4.00	3.71	4.02
Ohio	0.84	2.39	4.13	4.10	3.94	3.52	3.92
Wisconsin	0.95	3.07	4.11	4.56	4.75	4.65	4.18
West North Central	**0.70**	**2.11**	**3.64**	**3.03**	**3.14**	**3.26**	**3.49**
Iowa	0.78	2.48	3.82	3.58	3.48	3.54	4.05
Kansas	0.53	1.78	2.98	2.86	2.88	3.11	3.40
Minnesota	0.75	2.32	3.93	2.86	3.19	3.24	2.97
Missouri	0.69	1.86	3.43	2.93	2.94	3.18	3.46
Nebraska	0.69	2.02	4.00	3.16	3.32	3.34	4.00
North Dakota	1.40	4.55	4.16	3.81	3.51	3.51	4.70
South Dakota	0.72	2.11	4.07	3.27	3.34	3.29	5.48
South Atlantic	**0.80**	**2.44**	**4.35**	**3.95**	**3.70**	**3.82**	**3.31**
Delaware	0.98	2.41	4.59	4.34	4.01	3.44	1.72
District of Columbia	b	b	b	b	b	b	b
Florida	0.66	2.31	3.31	2.71	2.51	2.61	2.76
Georgia	0.69	2.30	4.24	4.62	4.32	4.60	4.69
Maryland	1.05	2.61	4.00	3.83	4.08	3.39	2.98
North Carolina	0.81	2.66	4.17	3.49	3.51	4.22	2.65
South Carolina	0.68	2.32	4.11	3.88	3.66	4.95	3.41
Virginia	0.98	2.60	4.65	3.82	3.69	3.80	2.51
West Virginia	0.76	2.35	5.97	7.32	4.14	4.03	4.15
East South Central	**0.64**	**2.15**	**3.87**	**3.26**	**3.12**	**3.42**	**4.02**
Alabama	0.64	2.25	3.99	4.35	3.84	4.08	5.16
Kentucky	0.71	2.23	3.86	3.43	3.20	3.20	3.35
Mississippi	0.62	2.10	3.86	4.15	3.80	3.69	4.54
Tennessee	0.61	2.04	3.80	2.69	2.78	3.21	3.91
West South Central	**0.63**	**2.15**	**3.46**	**2.51**	**2.46**	**2.99**	**2.81**
Arkansas	0.58	2.17	2.91	1.78	2.24	2.28	1.69
Louisiana	0.62	2.09	3.60	2.88	2.77	3.70	3.79
Oklahoma	0.62	2.05	3.10	1.76	2.00	1.99	1.88
Texas	0.64	2.21	3.45	2.50	2.41	2.78	2.56
Mountain	**0.71**	**2.37**	**3.54**	**3.14**	**3.38**	**3.56**	**4.03**
Arizona	0.70	2.26	3.47	3.11	3.44	3.95	5.66
Colorado	0.58	2.51	3.63	3.26	3.54	3.41	3.20
Idaho	1.14	3.43	3.68	2.77	3.43	4.57	3.89
Montana	0.95	3.42	4.12	3.64	3.49	3.44	4.03
Nevada	1.28	3.64	4.96	3.64	3.64	3.65	4.68
New Mexico	0.48	1.91	2.98	2.75	2.74	2.14	2.09
Utah	0.42	1.83	3.66	3.18	3.01	3.31	3.60
Wyoming	0.97	3.03	4.35	2.74	2.60	2.62	2.86
Pacific	**1.10**	**3.39**	**3.56**	**2.35**	**2.36**	**2.45**	**2.56**
Alaska	b	0.83	b	b	b	b	b
California	0.85	2.75	3.95	2.66	2.76	3.35	3.75
Hawaii	b	b	b	b	b	b	b
Oregon	1.27	4.29	3.39	2.14	2.16	2.25	2.38
Washington	1.11	3.40	3.60	2.83	3.08	2.58	2.55

a. Resale prices approximate city-gate prices.
b. No sales reported.
Note: Resale prices in some states may include take-or-pay costs resulting in higher average resale prices than average end-use prices.

TABLE 9-5
AVERAGE GAS PRICES OF WELLHEAD, CITY GATE, AND END-USER LEVEL
1970–1990

Year	Wellhead ($/Mcf[b])	City Gate[a] ($/MMBtu[b])	Cost to the Ultimate Customer ($/MMBtu[b])
1970	$0.171	$0.354	$0.641
1971	0.182	0.389	0.681
1972	0.186	0.429	0.730
1973	0.216	0.463	0.788
1974	0.304	0.573	0.953
1975	0.445	0.798	1.285
1976	0.580	0.984	1.599
1977	0.790	1.308	1.974
1978	0.905	1.466	2.184
1979	1.178	1.812	2.522
1980	1.588	2.414	3.134
1981	1.982	2.885	3.650
1982	2.457	3.598	4.456
1983	2.593	4.041	5.121
1984	2.665	3.890	5.128
1985	2.511	3.821	5.017
1986	1.942	3.579	4.602
1987	1.665	3.305	4.315
1988	1.690	3.243	4.312
1989	1.690	3.445	4.501
1990	1.720	3.542	4.588

a. Resale prices approximate city-gate prices. See Table 9-4.
b. Mcf and MMBtu prices are roughly comparable. On a MMBtu basis, the wellhead price would be slightly less.
Source: For wellhead price, *Monthly Energy Review*.

TABLE 9-6
GAS UTILITY INDUSTRY AVERAGE PRICES, BY STATE AND CLASS OF SERVICE, 1990

($/MMBtu)

Division and State	Total	Class of Service Residential	Commercial	Industrial	Electric Generation	Other
United States	**$4.59**	**$5.59**	**$4.84**	**$3.19**	**$2.65**	**$3.24**
New England	**6.10**	**7.68**	**6.20**	**4.41**	**2.40**	**5.53**
Connecticut	6.69	8.24	6.46	4.47	3.52	7.76
Maine	6.12	7.60	6.72	5.11	a	5.03
Massachusetts	5.83	7.63	6.08	4.29	2.35	a
New Hampshire	6.47	7.30	6.59	4.43	a	6.64
Rhode Island	6.56	7.10	6.02	5.16	b	4.30
Vermont	4.87	6.04	5.68	3.61	2.45	b
Middle Atlantic	**6.00**	**6.70**	**5.64**	**4.19**	**2.82**	**5.09**
New Jersey	5.49	6.40	5.12	3.90	2.68	4.73
New York	6.39	7.08	5.92	4.60	2.90	5.02
Pennsylvania	5.90	6.37	5.91	4.08	3.80	5.35
East North Central	**4.71**	**4.97**	**4.45**	**3.83**	**2.43**	**3.78**
Illinois	4.63	4.80	4.39	3.93	2.41	4.50
Indiana	4.87	5.40	4.56	3.73	3.40	3.88
Michigan	4.57	4.69	4.38	3.97	3.70	4.13
Ohio	4.81	5.04	4.52	3.95	3.23	3.86
Wisconsin	4.84	5.69	4.43	3.66	1.71	2.74
West North Central	**4.25**	**4.76**	**4.07**	**2.97**	**2.78**	**3.63**
Iowa	4.11	4.87	3.98	2.71	3.23	3.59
Kansas	4.02	4.42	3.73	2.96	3.04	3.30
Minnesota	4.09	4.63	4.10	2.93	2.02	3.50
Missouri	4.78	5.08	4.41	3.81	3.51	3.94
Nebraska	4.04	4.55	3.92	2.94	2.55	2.75
North Dakota	4.31	4.54	4.05	4.19	b	3.00
South Dakota	4.38	4.94	4.22	3.18	a	a
South Atlantic	**4.72**	**6.42**	**5.16**	**3.44**	**2.43**	**4.61**
Delaware	4.65	5.93	4.96	3.68	2.67	2.76
District of Columbia	6.52	7.58	5.82	a	a	a
Florida	3.31	7.85	4.93	3.29	2.41	4.45
Georgia	5.36	6.43	5.58	3.39	2.84	5.30
Maryland	5.44	6.34	5.17	4.49	2.34	3.26
North Carolina	4.34	5.91	4.59	3.31	3.08	4.33
South Carolina	4.41	6.73	5.57	3.37	3.42	5.10
Virginia	5.34	6.72	4.83	3.48	3.74	4.44
West Virginia	5.31	5.73	5.20	3.02	2.85	5.15
East South Central	**4.34**	**5.25**	**4.56**	**3.13**	**3.51**	**3.83**
Alabama	4.90	6.28	4.86	3.16	3.53	3.76
Kentucky	4.50	4.79	4.45	3.66	a	3.83
Mississippi	3.91	5.30	4.36	2.67	3.08	3.80
Tennessee	4.06	4.75	4.51	3.24	b	4.13
West South Central	**3.23**	**5.45**	**4.57**	**2.24**	**2.36**	**2.28**
Arkansas	4.25	4.98	4.39	2.92	a	3.20
Louisiana	3.57	6.00	5.43	2.59	2.09	2.17
Oklahoma	2.92	4.65	3.87	1.62	2.40	2.73
Texas	3.16	5.66	4.65	2.34	2.36	2.50
Mountain	**4.44**	**4.96**	**4.19**	**3.18**	**2.05**	**3.40**
Arizona	4.75	6.64	5.11	2.82	1.82	2.78
Colorado	4.24	4.49	3.93	3.60	2.48	3.48
Idaho	4.35	4.85	4.00	3.42	a	3.33
Montana	3.87	4.10	3.93	3.13	b	3.75
Nevada	4.83	5.32	4.25	3.74	3.24	3.84
New Mexico	4.81	5.53	4.34	3.58	3.54	3.84
Utah	4.48	4.87	3.98	3.33	2.49	b
Wyoming	4.34	4.70	4.30	2.91	2.65	3.81
Pacific	**4.52**	**5.57**	**5.19**	**3.39**	**3.18**	**4.02**
Alaska	3.19	3.84	3.30	a	2.47	a
California	4.61	5.62	5.49	3.61	3.21	4.06
Hawaii	12.30	16.30	10.42	13.06	a	a
Oregon	5.08	6.13	4.81	3.32	b	a
Wasington	3.57	4.96	3.96	2.26	1.98	3.75

a. No sales reported.
b. Less than 0.05 trillion Btu in sales.

TABLE 9-7
AVERAGE RESIDENTIAL GAS PRICES, BY STATE, 1975–1990

(\$/MMBtu)

Division and State	1975	1980	1985	1987	1988	1989	1990
United States	**\$1.69**	**\$3.61**	**\$5.95**	**\$5.39**	**\$5.29**	**\$5.45**	**\$5.59**
New England	**3.22**	**5.48**	**7.90**	**6.83**	**6.79**	**7.17**	**7.68**
Connecticut	3.27	5.73	8.89	7.94	7.63	7.99	8.24
Maine	4.25	6.35	8.80	7.74	7.25	7.18	7.60
Massachusetts	3.20	5.41	7.61	6.44	6.58	6.98	7.63
New Hampshire	2.46	4.55	7.26	6.63	6.00	6.81	7.30
Rhode Island	3.16	5.48	7.80	6.76	6.47	6.78	7.10
Vermont	2.80	6.43	6.53	6.39	5.83	5.86	6.04
Middle Atlantic	**2.26**	**4.45**	**7.17**	**6.36**	**6.06**	**6.46**	**6.70**
New Jersey	2.59	4.89	7.28	6.41	6.05	6.38	6.40
New York	2.43	4.86	7.62	6.69	6.41	6.91	7.08
Pennsylvania	1.90	3.76	6.52	5.88	5.61	5.95	6.37
East North Central	**1.56**	**3.37**	**5.74**	**5.04**	**4.90**	**4.98**	**4.97**
Illinois	1.58	3.46	5.37	4.63	4.36	4.61	4.80
Indiana	1.45	3.12	5.49	4.98	5.04	5.41	5.40
Michigan	1.60	3.15	6.03	5.20	5.04	4.87	4.69
Ohio	1.51	3.45	5.82	5.13	5.07	5.15	5.04
Wisconsin	1.71	3.80	6.39	5.95	5.85	5.61	5.69
West North Central	**1.37**	**3.08**	**5.24**	**4.51**	**4.56**	**4.55**	**4.76**
Iowa	1.41	3.20	5.32	4.65	4.73	4.67	4.87
Kansas	0.97	2.37	4.12	4.06	4.00	4.15	4.42
Minnesota	1.59	3.24	5.75	4.53	4.55	4.56	4.63
Missouri	1.45	3.37	5.47	4.66	4.72	4.75	5.08
Nebraska	1.26	2.71	4.97	4.31	4.43	4.43	4.55
North Dakota	1.50	3.83	5.59	5.47	4.86	4.45	4.54
South Dakota	1.40	3.11	5.62	4.73	4.76	4.65	4.94
South Atlantic	**2.02**	**4.15**	**6.71**	**6.27**	**5.96**	**6.25**	**6.42**
Delaware	2.34	4.15	6.80	6.15	5.83	6.21	5.93
District of Columbia	2.40	4.56	7.96	7.16	6.90	7.51	7.58
Florida	2.78	4.85	7.33	7.42	6.78	7.15	7.85
Georgia	1.75	4.06	6.44	6.30	6.21	6.07	6.43
Maryland	2.31	4.40	7.14	6.30	5.80	6.25	6.34
North Carolina	2.02	4.00	6.41	6.53	6.02	6.41	5.91
South Carolina	2.08	4.13	6.53	6.47	6.47	6.65	6.73
Virginia	2.29	4.24	7.07	5.90	5.71	6.52	6.72
West Virginia	1.47	3.62	5.97	5.61	5.03	5.22	5.73
East South Central	**1.43**	**3.37**	**5.47**	**5.25**	**5.14**	**5.13**	**5.25**
Alabama	1.72	4.10	6.24	6.44	6.37	6.11	6.28
Kentucky	1.30	3.08	5.27	4.49	[illegible]	4.63	4.79
Mississippi	1.41	3.39	5.34	5.86	[illegible]	5.48	5.30
Tennessee	1.33	2.94	4.96	4.61	[illegible]	4.69	4.75
West South Central	**1.35**	**3.00**	**5.23**	**4.93**	**5.03**	**5.21**	**5.45**
Arkansas	1.12	2.36	4.35	4.55	4.79	4.85	4.98
Louisiana	1.32	3.07	5.48	5.41	5.48	5.85	6.00
Oklahoma	1.15	2.38	4.45	4.53	4.36	4.41	4.65
Texas	1.47	3.30	5.59	4.98	5.18	5.38	5.66
Mountain	**1.34**	**3.23**	**5.29**	**4.83**	**4.88**	**4.99**	**4.96**
Arizona	1.83	3.74	6.66	5.87	6.76	6.75	6.64
Colorado	1.16	3.21	5.11	4.67	4.35	4.64	4.49
Idaho	2.25	4.94	6.56	5.45	5.43	4.93	4.85
Montana	1.18	2.88	4.51	4.08	4.01	3.92	4.10
Nevada	1.81	3.97	6.55	5.23	5.89	5.58	5.53
New Mexico	1.37	3.21	5.69	4.68	4.92	5.44	5.32
Utah	1.12	2.68	4.52	4.62	4.74	4.74	4.87
Wyoming	0.99	2.94	4.97	4.74	4.47	4.55	4.70
Pacific	**1.58**	**3.51**	**5.56**	**5.16**	**5.29**	**5.42**	**5.57**
Alaska	1.48	1.73	2.85	3.25	3.50	3.67	3.84
California	1.52	3.38	5.51	5.14	5.27	5.43	5.62
Hawaii	7.97	14.58	17.69	15.72	15.50	15.41	16.30
Oregon	2.41	5.36	6.73	6.46	6.57	6.01	6.13
Washington	2.12	4.91	6.44	5.24	5.33	5.33	4.96

TABLE 9-8
AVERAGE ANNUAL RESIDENTIAL GAS BILLS, BY STATE, 1975-1990

($/Customer)

Division and State	1975	1980	1985	1987	1988	1989	1990
United States	**$206**	**$401**	**$585**	**$499**	**$516**	**$534**	**$502**
New England	**274**	**493**	**702**	**637**	**646**	**699**	**708**
Connecticut	285	505	762	740	742	781	778
Maine	165	274	390	355	345	388	411
Massachusetts	276	494	684	600	620	680	689
New Hampshire	234	444	688	635	572	672	689
Rhode Island	266	474	696	641	630	659	693
Vermont	261	661	687	663	614	683	660
Middle Atlantic	**231**	**458**	**679**	**619**	**622**	**671**	**635**
New Jersey	229	439	640	598	593	642	570
New York	217	441	663	599	603	655	640
Pennsylvania	257	501	736	671	680	722	682
East North Central	**257**	**535**	**787**	**630**	**672**	**688**	**606**
Illinois	266	562	792	612	636	669	629
Indiana	220	449	673	558	616	659	596
Michigan	268	545	879	680	723	721	611
Ohio	259	547	766	656	690	706	589
Wisconsin	238	497	744	590	668	657	580
West North Central	**209**	**405**	**615**	**447**	**508**	**513**	**488**
Iowa	215	408	619	453	531	534	493
Kansas	145	301	457	390	417	427	427
Minnesota	255	450	743	468	569	580	522
Missouri	215	449	617	469	510	509	504
Nebraska	195	350	588	418	477	487	458
North Dakota	245	489	696	528	561	543	504
South Dakota	203	365	651	438	503	519	488
South Atlantic	**194**	**386**	**524**	**516**	**503**	**506**	**484**
Delaware	219	388	552	540	540	564	501
District of Columbia	230	472	719	693	692	732	712
Florida	107	194	238	251	243	236	231
Georgia	181	393	526	519	515	472	488
Maryland	225	425	607	561	541	575	539
North Carolina	188	388	491	554	514	521	428
South Carolina	151	319	380	440	441	426	385
Virginia	230	423	596	547	543	612	545
West Virginia	219	473	650	623	588	587	638
East South Central	**153**	**345**	**465**	**445**	**456**	**442**	**417**
Alabama	157	356	460	481	487	439	448
Kentucky	177	401	549	460	487	505	446
Mississippi	122	291	393	429	430	395	364
Tennessee	140	299	423	395	400	409	386
West South Central	**130**	**233**	**392**	**358**	**372**	**390**	**362**
Arkansas	128	226	379	387	429	434	389
Louisiana	108	236	362	361	365	374	356
Oklahoma	138	246	424	383	399	404	386
Texas	135	265	394	346	357	385	353
Mountain	**178**	**336**	**498**	**406**	**424**	**431**	**424**
Arizona	141	221	363	311	351	331	338
Colorado	171	385	509	429	427	438	430
Idaho	249	393	534	380	389	390	359
Montana	203	363	558	406	433	463	446
Nevada	204	347	480	355	407	394	381
New Mexico	173	318	480	399	419	435	446
Utah	201	373	610	500	519	540	519
Wyoming	160	378	610	461	486	509	506
Pacific	**174**	**286**	**420**	**346**	**346**	**360**	**363**
Alaska	328	375	586	584	634	714	763
California	166	272	405	337	333	347	351
Hawaii	232	364	360	308	296	297	314
Oregon	258	428	562	437	488	460	463
Washington	259	469	605	439	468	497	448

TABLE 9-9
AVERAGE RESIDENTIAL CONSUMPTION AND COSTS
1967–1990[a]

	Gas				
Year	Consumption (MMBtu/ Customer)	Annual Bill ($/Customer)	Price ($/MMBtu)	Electric Price ($/MMBtu)	Number 2 Fuel Oil Price ($/MMBtu)
1967	121.5	$122.03	$1.00	$6.36	$1.21
1968	124.1	124.48	1.00	6.21	1.25
1969	128.4	130.08	1.01	6.13	1.28
1970	129.2	136.69	1.06	6.15	1.33
1971	129.9	145.28	1.12	6.42	1.41
1972	130.4	154.56	1.19	6.71	1.42
1973	124.5	155.73	1.25	6.98	1.64
1974	119.6	169.82	1.42	8.29	2.60
1975	121.9	206.24	1.69	9.40	2.81
1976	121.3	240.48	1.98	10.11	3.01
1977	118.7	276.87	2.33	11.08	3.42
1978	121.0	307.40	2.53	11.81	3.66
1979	118.6	346.39	2.92	12.69	5.24
1980	111.0	400.84	3.61	14.45	7.21
1981	104.4	434.43	4.16	17.00	8.95
1982	107.1	531.96	4.97	18.90	8.70
1983	99.1	583.00	5.88	20.01	7.92
1984	102.0	605.80	5.94	20.93	8.08
1985	98.3	584.90	5.95	21.69	7.78
1986	94.0	531.51	5.65	21.86	6.02
1987	92.6	498.75	5.39	21.83	6.13
1988	97.5	515.56	5.29	21.95	6.10
1989[R]	98.0	534.33	5.45	22.42	6.40
1990	89.7	501.98	5.59	22.92[P]	7.84

a. Prices given are for total usage.

P–Preliminary. R–Revised.

Sources: For electric price, Edison Electric Institute *Statistical Yearbook*. For oil price, Bureau of Labor Statistics.

TABLE 9-10
AVERAGE RESIDENTIAL GAS PRICES BY CENSUS DIVISION HEATING SEASON—NOVEMBER THRU MARCH

($/MMBtu)

	1984–85	1985–86	1986–87	1987–88	1988–89	1989–90	1990–91[a]
Total U.S.	$5.81	$5.54	$5.16	$4.98	$5.36	$5.32	$5.36
NE	7.70	7.41	6.69	6.50	6.88	7.27	7.73
MA	6.87	6.75	6.18	5.71	6.06	6.36	6.34
ENC	5.59	5.27	4.84	4.69	4.92	4.77	4.82
WNC	5.18	4.82	4.19	4.30	4.3[illegible]	4.64	4.44
SA	6.46	6.35	6.21	5.58	5.93	6.11	6.05
ESC	5.34	5.08	4.89	4.89	4.86	4.94	5.24
WSC	4.99	4.83	4.48	4.53	4.85	5.00	5.05
M	5.20	5.01	4.61	4.52	4.57	4.72	4.52
P	5.68	5.54	4.97	5.11	5.30	5.32	5.70

a. Data used for 1991 were based on the *Quarterly Report of Gas Industry Operations.*

TABLE 9-11
AVERAGE GAS CONSUMPTION BY HOUSEHEATING CUSTOMERS BY CENSUS DIVISION HEATING SEASON—NOVEMBER THRU MARCH

(MMBtu/Customer)

	1984–85	1985–86	1986–87	1987–88	1988–89	1989–90	1990–91[a]
Total U.S.	75.3	72.9	70.1	73.8	70.9	71.6	69.8
NE	80.6	84.8	84.2	86.5	86.3	86.0	71.5
MA	95.4	97.2	97.4	93.7	97.7	98.4	90.9
ENC	101.3	103.4	94.3	100.7	97.2	95.5	92.5
WNC	87.4	86.5	71.9	82.3	81.1	77.6	77.5
SA	60.7	61.6	61.5	64.7	62.3	65.8	66.1
ESC	64.2	60.3	60.2	63.7	62.0	65.7	65.9
WSC	54.5	48.6	53.9	57.4	54.2	51.7	49.6
M	63.9	58.7	58.5	63.9	61.0	59.4	65.0
P	50.3	41.3	41.7	42.1	43.1	41.6	41.1

a. Data used for 1991 were based on the *Quarterly Report of Gas Industry Operations.*

TABLE 9-12
AVERAGE GAS BILL FOR HOUSEHEATING CUSTOMERS BY CENSUS DIVISION HEATING SEASON—NOVEMBER THRU MARCH

($/Customer)

	1984–85	1985–86	1986–87	1987–88	1988–89	1989–90	1990–91[a]
Total U.S.	$437	$404	$362	$368	$380	$381	$374
NE	621	628	563	563	594	626	553
MA	656	656	602	535	593	626	576
ENC	567	545	457	472	478	455	446
WNC	453	417	301	354	353	359	344
SA	392	391	382	361	370	402	400
ESC	342	306	294	312	301	324	346
WSC	272	235	241	260	263	258	250
M	332	294	269	289	279	280	294
P	286	208	208	215	229	221	234

a. Data used for 1991 were based on the *Quarterly Report of Gas Industry Operations.*

TABLE 9-13
GAS UTILITY INDUSTRY AVERAGE PRICES, FOR GAS USED FOR ELECTRIC GENERATION, BY STATE, 1984–1990

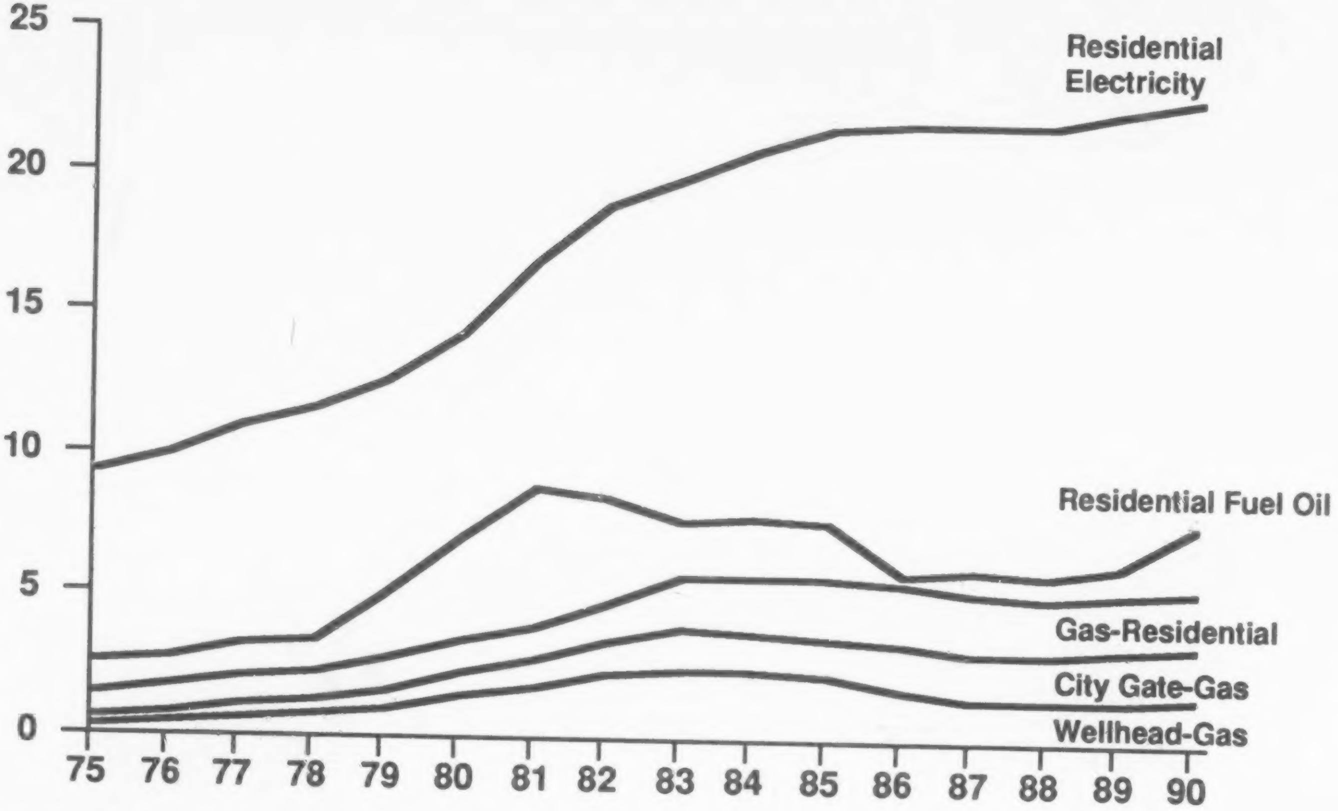
($/MMBtu)

Division and State	1984	1985	1986	1987	1988	1989^R	1990
United States	**$4.22**	**$3.81**	**$2.72**	**$2.51**	**$2.55**	**$2.69**	**$2.65**
New England	**4.01**	**3.54**	**2.36**	**2.37**	**2.41**	**2.50**	**2.40**
Connecticut	a	a	b	b	b	3.14	3.52
Maine	a	a	a	a	a	a	a
Massachusetts	4.02	3.54	2.32	2.47	2.43	2.49	2.35
New Hampshire	a	a	a	a	2.40	b	a
Rhode Island	3.86	3.57	3.34	2.35	2.18	2.66	b
Vermont	a	a	a	a	a	2.68	2.45
Middle Atlantic	**4.23**	**3.92**	**2.91**	**2.74**	**2.58**	**2.80**	**2.82**
New Jersey	4.35	4.05	2.88	2.55	2.51	2.82	2.68
New York	4.18	3.86	2.91	3.00	2.77	2.66	2.90
Pennsylvania	4.89	5.04	4.66	2.30	2.74	4.03	3.80
East North Central	**4.73**	**4.91**	**4.36**	**3.59**	**3.49**	**3.44**	**2.43**
Illinois	4.90	5.17	4.62	3.65	3.37	3.53	2.41
Indiana	4.17	4.14	3.82	3.48	3.71	3.72	3.40
Michigan	4.65	4.96	4.31	3.94	4.03	3.58	3.70
Ohio	5.59	4.86	4.47	2.96	3.26	3.73	3.23
Wisconsin	4.17	4.17	3.67	3.59	3.42	2.93	1.71
West North Central	**3.36**	**3.18**	**2.77**	**2.59**	**2.67**	**2.61**	**2.78**
Iowa	3.86	3.82	3.54	2.60	2.66	2.75	3.23
Kansas	3.16	2.89	2.45	2.60	2.55	2.88	3.04
Minnesota	3.94	3.90	3.31	2.09	2.47	1.80	2.02
Missouri	3.81	3.26	2.76	3.06	3.09	3.46	3.51
Nebraska	3.40	3.50	3.26	2.77	2.60	2.60	2.55
North Dakota	b	b	b	b	b	b	b
South Dakota	b	b	b	2.47	4.21	2.16	a
South Atlantic	**3.43**	**3.33**	**2.12**	**2.70**	**2.10**	**2.50**	**2.43**
Delaware	a	3.99	2.50	2.30	2.30	2.68	2.67
District of Columbia	a	a	a	a	a	a	a
Florida	3.42	3.32	2.10	2.74	2.09	2.49	2.41
Georgia	4.31	4.21	2.07	2.18	2.79	2.99	2.84
Maryland	a	b	2.54	2.64	2.42	2.55	2.34
North Carolina	4.76	b	2.65	3.38	3.37	3.54	3.08
South Carolina	a	4.50	3.47	2.78	3.37	3.54	3.42
Virginia	a	a	2.84	a	a	a	3.74
West Virginia	4.48	3.62	2.11	2.25	2.25	2.60	2.85
East South Central	**2.88**	**2.81**	**2.74**	**3.13**	**2.50**	**1.36**	**3.51**
Alabama	3.69	4.05	3.53	2.59	2.50	3.09	3.53
Kentucky	a	a	a	a	a	a	a
Mississippi	2.88	2.81	2.73	3.15	2.75	1.29	3.08
Tennessee	3.48	b	b	b	2.36	2.65	b
West South Central	**3.88**	**3.48**	**2.71**	**2.31**	**2.41**	**2.45**	**2.36**
Arkansas	3.69	3.61	2.80	3.57	3.60	b	a
Louisiana	3.66	3.57	2.89	1.94	1.79	1.85	2.09
Oklahoma	2.79	2.75	3.53	2.99	2.77	2.51	2.40
Texas	3.92	3.49	2.70	2.33	2.38	2.49	2.36
Mountain	**4.02**	**3.63**	**3.16**	**3.01**	**2.48**	**1.96**	**2.05**
Arizona	4.04	3.59	2.81	2.90	1.79	1.89	1.82
Colorado	3.89	3.62	3.08	2.84	2.35	2.21	2.48
Idaho	a	a	a	a	a	a	a
Montana	5.41	0.76	b	5.07	4.44	4.11	b
Nevada	4.54	4.21	3.86	3.76	2.95	3.45	3.24
New Mexico	3.68	3.41	3.42	2.77	3.22	3.66	3.54
Utah	a	3.83	2.39	3.34	2.82	3.12	2.49
Wyoming	a	4.60	2.88	2.66	2.65	2.65	2.65
Pacific	**4.99**	**4.40**	**2.88**	**2.65**	**2.83**	**3.12**	**3.18**
Alaska	1.57	1.69	1.97	1.88	2.13	2.30	2.47
California	5.09	4.48	2.91	2.68	2.85	3.15	3.21
Hawaii	a	a	a	a	a	a	a
Oregon	b	a	a	a	a	b	b
Washington	a	b	b	b	b	1.68	1.98

a. No sales reported.
b. Less than 0.05 trillion Btu in sales.
R–Revised.

CHART 9-1

AVERAGE PRICES OF FUELS & ELECTRICITY
(DOLLARS/MILLION BTU)



REFERENCE: TABLES 9-5, 9-9

TABLE 9-15
INDEXES OF WHOLESALE PRICES OF GAS, YEARLY AVERAGES, 1970-1990 AND MONTHLY AVERAGES, 1990

(1982–1984 = 100)

Year and Month	All Gas	Utility Gas	Liquefied Petroleum Gas
1970	9.8	7.9	a
1971	10.2	8.4	15.2
1972	10.8	9.0	14.9
1973	11.9	9.8	18.0
1974	15.3	11.6	29.2
1975	20.4	16.1	35.2
1976	27.0	21.8	45.8
1977	36.6	30.8	57.3
1978	40.4	36.5	54.7
1979	51.3	47.6	64.7
1980	71.7	63.3	102.3
1981	88.6	82.1	112.0
1982	100.0	100.0	100.0
1983	108.1	106.6	113.5
1984	104.5	106.1	99.1
1985	98.7	102.9	86.3
1986	83.2	89.6	61.0
1987	74.1	79.5	57.4
1988	71.4	77.4	51.6
1989	75.3	82.0	52.7
1990	78.4	80.4	77.4
January	82.5	83.8	85.0
February	81.8	84.4	78.2
March	76.8	82.5	59.2
April	74.3	80.4	54.7
May	73.9	80.1	53.6
June	71.8	77.6	53.3
July	76.4	83.0	54.5
August	71.8	74.3	67.6
September	76.5	75.9	86.7
October	80.7	75.1	113.4
November	85.9	80.2	119.3
December	88.4	87.0	103.1

a. Not Available.

Source: Bureau of Labor Statistics, *Producer Prices and Price Index*, 1990. Represents unofficial estimates of U.S. Bureau of Labor Statistics, based on wellhead prices for natural gas by 20 major pipeline companies, and L.P.G. price quotations from 2 major producers.

SECTION 10
ENERGY CONSUMPTION

	1990	% Change 90/89
Average Annual Consumption		
(Millions of Btu per Customer)		
Total	181.4	− 8.2
Residential	89.7	− 8.5
Commercial	516.3	− 7.5
Industrial	18,133.2	− 6.2
Other	3,570.8	−10.4

TABLE 10-1
ANNUAL CONSUMPTION OF ENERGY RESOURCES IN THE UNITED STATES, BY MAJOR SOURCES, BY CONSUMING SECTORS, 1983–1990[a]

(Trillions of Btu)

Consuming Sectors	Coal and Coke	Natural gas dry[b]	Petroleum[c]	Hydropower[d]	Nuclear power[d]	Other[e]	Total gross energy inputs[f]	Utility electricity purchased[g]	Total Sector energy inputs
Household and commercial:									
1983	192	7,025	2,498	—	—	—	9,715	4,680	14,395
1984	209	7,291	2,585	—	—	—	10,086	4,928	15,014
1985	176	7,078	2,573	—	—	—	9,827	5,061	14,888
1986	176	6,824	2,576	—	—	—	9,576	5,235	14,811
1987	162	6,954	2,618	—	—	—	9,734	5,443	15,177
1988	168	7,512	2,693	—	—	—	10,373	5,724	16,097
1989[R]	146	7,721	2,625	—	—	—	10,491	5,859	16,350
1990[P]	152	7,288	2,499	—	—	—	9,939	6,017	15,956
Industrial:									
1983	2,474[h]	6,821	7,420	33	—	—	16,748	2,648	19,396
1984	2,831[h]	7,449	7,894	33	—	—	18,207	2,859	21,066
1985	2,747[h]	7,080	7,725	33	—	—	17,585	2,855	20,440
1986	2,626[h]	6,693	7,953	32	—	—	17,304	2,834	20,138
1987	2,682[h]	7,325	8,210	32	—	—	18,249	2,928	21,177
1988	2,868[h]	7,693	8,463	32	—	—	19,056	3,059	22,115
1989[R]	2,810	8,123	8,214	33	—	—	19,210	3,158	22,368
1990[P]	2,715	8,645	8,488	33	—	—	19,921	3,200	23,121
Transportation:[i]									
1983	—	505	18,593	—	—	—	19,098	11	19,109
1984	—	545	19,286	—	—	—	19,831	12	19,843
1985	—	519	19,534	—	—	—	20,053	13	20,066
1986	—	499	20,215	—	—	—	20,714	13	20,727
1987	—	535	20,780	—	—	—	21,315	13	21,328
1988	—	632	21,510	—	—	—	22,142	14	22,156
1989[R]	—	649	21,687	—	—	—	22,336	14	22,350
1990[P]	—	603	21,406	—	—	—	22,008	14	22,022
Electricity generation, utilities									
1983	13,213	2,998	1,544	3,866	3,203	133	24,957	(7,339)	—
1984	14,020	3,220	1,286	3,725	3,553	174	25,978	(7,799)	—
1985	14,542	3,160	1,090	3,330	4,149	213	26,484	(7,929)	—
1986	14,444	2,691	1,452	3,353	4,471	231	26,642	(8,082)	—
1987	15,173	2,935	1,257	3,035	4,906	248	27,550	(8,384)	—
1988	15,850	2,709	1,563	2,607	5,661	235	28,625	(8,797)	—
1989[R]	15,988	2,882	1,685	2,852	5,677	217	29,301	(9,031)	—
1990[P]	16,159	2,871	1,251	2,910	6,185	202	29,578	(9,231)	—
Total gross energy inputs:[j]									
1983	15,894	17,357	30,054	3,899	3,203	118	70,525	—	52,907
1984	17,070	18,507	31,051	3,757	3,553	163	74,101	—	55,923
1985	17,478	17,834	30,922	3,363	4,149	199	73,945	—	55,390
1986	17,262	16,708	32,196	3,385	4,471	215	74,237	—	55,677
1987	18,008	17,745	32,865	3,068	4,906	253	76,845	—	57,678
1988	18,846	18,551	34,228	2,639	5,661	274	80,200	—	60,371
1989[R]	18,944	19,382	34,211	2,884	5,677	248	81,346	—	61,076
1990[P]	19,060	19,414	33,644	2,942	6,185	207	81,453	—	61,106

a. Gross energy is the total of inputs into the economy of the primary fuels (including imports) or their derivatives, plus the generation of hydro, nuclear power and other (converted to equivalent energy inputs).

b. Excludes natural gas liquids.

c. Petroleum products including still gas, liquefied refinery gas and natural gas liquids.

d. Outputs and hydropower (adjusted for net imports or net exports) are converted to theoretical energy inputs using 10,320 Btu per net KWH for 1987. Energy input for nuclear power converted at an average heat rate of 10,807 Btu per net KWH. Excludes inputs for power generation by non-utility plants, which are included within the other consuming sectors.

e. Includes geothermal power and electricity produced from wood and waste.

f. Gross energy resource inputs with electricity generation shown as separate consuming sector.

g. Utility electricity generated and imported, distributed to the other consuming sectors as energy resource inputs.

h. Includes net imports of coke of −16 trillion Btu in 1981, −22 trillion Btu in 1982, −16 trillion Btu in 1983, −11 trillion Btu in 1984, −13 trillion Btu in 1985, −17 trillion Btu in 1986, 9 trillion Btu in 1987, 40 trillion Btu in 1988, 30 trillion Btu in 1989, and 5 trillion Btu in 1990.

i. Includes bunkers and military transportation.

j. Total gross inputs may not add due to "unaccounted for" units.

R–Revised. P–Preliminary.

Source: U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review*.

TABLE 10-2

ANNUAL CONSUMPTION OF FOSSIL ENERGY RESOURCES, AND ELECTRICITY FROM HYDROPOWER AND NUCLEAR POWER, IN THE UNITED STATES, 1970–1990[a]

(Trillions of Btu)

Year	Natural Gas Dry[b,c]	Natural Gas Liquids	Crude Petroleum and Products	Bituminous Coal and Lignite[d]	Anthracite Coal	Hydro-power[e]	Nuclear[e]	Other[f]	Grand Total Energy
1970	22,029	2,494	27,043	12,488	210	2,650	229	g	67,143
1971	22,470	2,496	28,074	11,858	187	2,862	404	g	68,351
1972	22,698	2,706	30,260	12,273	150	2,946	576	g	71,609
1973	22,512	2,652	32,188	12,970	h	3,010	910	46	74,282
1974	21,732	2,565	30,890	12,719	h	3,309	1,272	56	72,543
1975	19,948	2,484	30,247	12,677	h	3,219	1,900	72	70,545
1976	20,345	i	35,175	13,585	h	3,065	2,111	81	74,362
1977	19,931	i	37,122	13,937	h	2,515	2,702	82	76,289
1978	20,000	i	37,965	13,890	h	3,142	3,024	68	78,089
1979	20,666	i	37,122	15,102	h	3,141	2,776	89	78,897
1980	20,394	i	34,201	15,388	h	3,118	2,739	114	75,954
1981	19,928	i	31,931	15,907	h	3,105	3,008	111	73,990
1982	18,505	i	30,231	15,322	h	3,572	3,131	86	70,847
1983	17,357	i	30,054	15,894	h	3,899	3,203	118	70,525
1984	18,507	i	31,051	17,070	h	3,757	3,553	163	74,101
1985	17,834	i	30,922	17,478	h	3,363	4,149	199	73,945
1986	16,708	i	32,196	17,262	h	3,385	4,471	215	74,237
1987[R]	17,744	i	32,865	18,008	h	3,068	4,906	253	76,844
1988[R]	18,553	i	34,222	18,846	h	2,639	5,661	274	80,196
1989[R]	19,382	i	34,211	18,944	h	2,884	5,677	248	81,346
1990[P]	19,414	i	33,644	19,060	h	2,942	6,185	207	81,453

a. Represents production minus exports plus imports, and adjusted for change in inventories.

b. The Btu value per cubic foot for natural gas dry for 1966 is 1,033; 1967 1,032; 1968–1971 1,031; 1972 1,027; 1973 1,021; 1974 1,024; 1975 1,021; 1976 1,020; 1977 1,021; 1978 1,019; 1979 1,021; 1980 1,026; 1981 1,027; 1982 1,028; 1983 and 1985 1,031; 1984 1030; 1986–1987 1029; 1988 1,027; 1989 1028; 1990 1031.

c. Marketed production minus shrinkage caused by liquids extraction.

d. Includes net imports of coke of −7 trillion Btu in 1973, 56 trillion Btu in 1974, 14 trillion Btu in 1975, 15 trillion Btu in 1977, 125 trillion Btu in 1978, 63 trillion Btu in 1979, −35 trillion Btu in 1980, −16 trillion Btu in 1981, −22 trillion Btu in 1982, −16 trillion Btu in 1983, −11 trillion in 1984, −13 trillion in 1985, −17 trillion Btu in 1986, 9 trillion Btu in 1987, −40 trillion Btu in 1988, 30 million Btu in 1989, 5 trillion Btu in 1990.

e. See Table 3-1 for procedures used to determine Btu equivalents.

f. Includes energy from geothermal, wood or waste products.

g. Not available.

h. Included in "Bituminous Coal and Lignite."

i. Included in "Crude Petroleum and Products."

R–Revised. P–Preliminary.

Source: Prior to 1977, U.S. Bureau of Mines, 1977 and beyond, U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review*.

TABLE 10-3
ANNUAL CONSUMPTION OF FOSSIL ENERGY RESOURCES, AND ELECTRICITY FROM HYDROPOWER AND NUCLE[illegible]R POWER, IN THE UNITED STATES, 1971–1990

(Percentage)

Year	Natural Gas Dry	Natural Gas Liquids	Crude Petroleum and Products	Bituminous Coal and Lignite	Anthracite Coal	Hydro-power	Nuclear	Other	Grand Total Energy
1971	32.9	3.6	41.1	17.3	0.3	4.2	0.6	a	100.0
1972	31.7	3.8	42.3	17.1	0.2	4.1	0.8	a	100.0
1973	30.3	3.6	43.3	17.4	b	4.1	1.2	0.1	100.0
1974	30.0	3.4	42.6	17.5	b	4.6	1.8	0.1	100.0
1975	28.3	3.4	42.9	18.0	b	4.6	2.7	0.1	100.0
1976	27.4	c	47.3	18.3	b	4.1	2.8	0.1	100.0
1977	26.1	c	48.7	18.3	b	3.3	3.5	0.1	100.0
1978	25.6	c	48.6	17.8	b	4.0	3.9	0.1	100.0
1979	26.2	c	47.1	19.1	b	4.0	3.5	0.1	100.0
1980	26.9	c	45.0	20.3	b	4.1	3.6	0.1	100.0
1981	26.9	c	43.2	21.5	b	4.2	4.1	0.2	100.0
1982	26.1	c	42.7	21.6	b	5.0	4.4	0.1	100.0
1983	24.6	c	42.6	22.5	b	5.5	4.5	0.2	100.0
1984	25.0	c	41.9	23.0	b	5.1	4.8	0.2	100.0
1985	24.1	c	41.8	23.6	b	4.5	5.6	0.3	100.0
1986	22.5	c	43.4	23.3	b	4.6	6.0	0.3	100.0
1987^{R}	23.1	c	42.8	23.4	b	4.0	6.4	0.3	100.0
1988^{R}	23.1	c	42.7	23.5	b	3.3	7.1	0.3	100.0
1989^{R}	23.8	c	42.1	23.3	b	3.5	7.0	0.3	100.0
1990^{P}	23.8	c	41.3	23.4	b	3.6	7.6	0.3	100.0

a. Not available.

b. Included in "Bituminous Coal and Lignite."

c. Included in "Crude Petroleum and Products."

R–Revised. P– Preliminary.

Source: Same as Table 10-2.

TABLE 10-4
ENERGY CONSUMPTION PER CAPITA IN THE UNITED STATES, 1971–1990

Year	Total Energy Consumed (Trillions of Btu)	Natural Gas Consumed (Trillions of Btu)	Resident Population (Thousands)	Energy Consumed Per Capita (Millions of Btu)	Natural Gas Consumed Per Capita (Millions of Btu)	Gross National Product (Billions of 1982 $)	Total Energy Per Dollar of GNP (Thousands of Btu/1982 $)	Index of Industrial Production (1987 = 100)
1971	68,351	22,470	206,827	330	109	2,484.8	27.5	62.2
1972	71,609	22,698	209,284	342	108	2,608.5	27.5	68.3
1973	74,282	22,505	211,357	351	106	2,744.1	27.1	73.8
1974	72,543	21,725	213,342	340	102	2,729.3	26.6	72.7
1975	70,545	19,948	215,465	327	93	2,695.0	26.2	66.3
1976	74,362	20,345	217,563	342	94	2,826.7	26.3	72.4
1977	76,289	19,931	219,760	347	91	2,958.6	25.8	78.2
1978	78,089	20,000	222,095	352	90	3,115.2	25.1	82.6
1979	78,897	20,666	224,567	351	92	3,192.4	24.7	85.7
1980	75,955	20,394	226,505	335	90	3,187.1	23.8	84.1
1981	73,990	19,928	229,307	323	87	3,248.8	22.8	85.7
1982	70,847	18,505	231,507	306	80	3,166.0	22.4	81.9
1983	70,525	17,357	233,974	301	74	3,277.0	21.5	84.9
1984	74,101	18,507	236,636	313	78	3,492.0	21.2	92.8
1985	73,945	17,834	238,885	310	75	3,618.7	20.4	94.3
1986	74,237	16,708	241,596	307	69	3,717.9	20.0	95.3
1987^{R}	76,844	17,744	243,419	315	72	3,845.3	20.0	100.0
1988^{R}	80,196	18,553	[illegible]	326	76	4,016.9	20.0	105.8
1989^{R}	81,346	19,382	[illegible]	328	79	4,117.7	19.8	108.1
1990^{P}	81,453	19,414	248,710	328	78	4,155.8	19.6	109.1

R–Revised. P–Preliminary.

Source: U.S. Department of Energy, U.S. Bureau of the Census and the Federal Reserve Board.

TABLE 10-5
GAS UTILITY INDUSTRY AVERAGE ANNUAL CONSUMPTION PER CUSTOMER, BY CLASS OF SERVICE, 1967-1990[a]

(MMBtu/Customer)

Year	Total	Residential	Commercial	Industrial[b]	Other[b]
1967	345.2	121.5	537.8	38,710.3	11,397.0
1968	362.4	124.1	567.6	40,378.0	13,129.2
1969	376.7	128.4	611.0	42,220.0	11,327.2
1970	386.8	129.2	640.9	42,386.7	12,232.3
1971	395.0	129.9	673.8	42,235.0	17,064.6
1972	397.7	130.4	697.3	41,948.8	16,428.8
1973	377.0	124.5	684.6	40,051.7	15,129.5
1974	361.1	119.6	676.1	42,066.8	12,586.1
1975	333.6	121.9	708.9	37,253.5	12,039.8
1976	329.7	121.3	718.6	40,022.3	3,511.6
1977	316.8	118.7	714.8	39,217.5	3,996.3
1978	322.2	121.0	743.6	36,635.8	4,511.8
1979	330.3	118.6	726.5	40,345.3	5,133.9
1980	326.4	111.0	701.4	42,559.4	3,454.7
1981	320.7	104.4	666.4	44,020.2	3,235.0
1982	292.9	107.1	680.6	36,514.2	3,244.5
1983	263.5	99.1	625.1	32,759.3	2,996.9
1984	266.8	102.0	642.3	33,253.2	3,094.2
1985	252.5	98.3	612.7	31,473.1	2,739.9
1986	219.4	94.0	575.3	24,434.5	3,215.2
1987	204.4	92.6	541.7	21,374.4	2,885.5
1988	204.2	97.5	566.7	21,144.0	3,074.1
1989R	197.7	98.0	558.0	19,339.5	3,983.6
1990	181.4	89.7	516.3	18,133.2	3,570.8

a. Excludes customers purchasing for resale and sales for resale. Customer data is based on yearly averages.

b. Prior to 1976, "Other" electric generation (See Table 6-13) is included in the "Other" class of service. For 1976 and beyond, all electric generation is included in the Industrial category.

R–Revised.

TABLE 10-6
GAS UTILITY INDUSTRY AVERAGE ANNUAL RESIDENTIAL CONSUMPTION PER CUSTOMER BY STATE, 1975-1990[a]

(MMBtu/Customer)

Division and State	1975	1980	1985	1987	1988	1989R	1990
United States	**121.9**	**111.0**	**98.3**	**92.6**	**97.5**	**98.0**	**89.7**
New England	**85.3**	**90.0**	**88.8**	**93.2**	**95.2**	**97.4**	**92.2**
Connecticut	84.6	88.1	85.8	93.2	97.3	97.8	94.4
Maine	38.7	43.2	44.3	45.8	47.6	54.0	54.1
Massachusetts	86.0	91.3	89.9	93.1	94.3	97.4	90.4
New Hampshire	95.1	97.7	94.7	95.8	95.4	98.6	94.4
Rhode Island	84.0	86.7	89.3	94.8	97.3	97.3	97.6
Vermont	93.3	102.8	105.3	103.9	105.3	116.4	109.2
Middle Atlantic	**102.1**	**102.8**	**94.7**	**97.4**	**102.7**	**103.8**	**94.8**
New Jersey	88.5	89.7	87.8	93.3	98.0	100.6	89.1
New York	89.4	90.7	87.0	89.5	94.1	94.9	90.4
Pennsylvania	135.1	133.3	112.9	114.1	121.1	121.4	107.2
East North Central	**164.5**	**158.6**	**137.1**	**125.2**	**137.0**	**138.2**	**121.9**
Illinois	168.9	162.5	147.3	132.2	145.7	145.1	131.0
Indiana	151.5	143.9	122.8	112.0	122.2	121.9	110.5
Michigan	167.7	172.8	145.8	130.9	144.4	148.0	130.2
Ohio	171.2	158.3	131.8	128.1	136.2	137.1	116.8
Wisconsin	139.0	130.8	116.5	99.1	114.1	117.1	102.1
West North Central	**152.6**	**131.3**	**117.4**	**99.2**	**111.3**	**112.7**	**102.6**
Iowa	152.2	127.7	116.4	97.5	112.3	114.4	101.2
Kansas	150.4	126.6	110.8	95.9	104.2	102.9	96.6
Minnesota	159.7	138.9	129.2	103.2	122.4	127.1	112.8
Missouri	148.9	133.2	112.7	100.7	108.1	107.0	99.2
Nebraska	155.2	128.9	118.4	96.9	107.7	109.9	100.7
North Dakota	163.0	127.6	124.5	96.5	115.4	122.0	111.1
South Dakota	145.0	117.4	115.8	92.6	105.7	111.4	98.9
South Atlantic	**96.3**	**93.2**	**78.0**	**82.2**	**84.4**	**81.0**	**75.5**
Delaware	93.6	93.4	81.1	87.8	92.6	90.8	84.5
District of Columbia	95.9	103.5	90.3	96.7	100.2	97.4	94.0
Florida	38.6	40.0	32.5	33.9	35.9	32.9	29.4
Georgia	103.5	96.9	81.7	82.5	83.0	77.8	75.8
Maryland	97.5	96.6	85.0	89.2	93.4	91.9	85.1
North Carolina	92.7	97.1	76.6	84.8	85.4	81.3	72.4
South Carolina	72.7	77.3	58.1	68.0	68.1	64.0	57.3
Virginia	100.1	99.7	84.3	92.7	95.0	93.9	81.1
West Virginia	149.4	131.0	108.9	111.2	117.1	112.3	111.4
East South Central	**107.1**	**102.4**	**85.0**	**84.9**	**88.7**	**86.2**	**79.5**
Alabama	91.2	86.9	73.6	74.8	76.5	71.8	71.4
Kentucky	136.7	130.4	104.2	102.4	110.4	109.2	93.1
Mississippi	86.6	85.9	73.5	73.2	74.4	72.1	68.8
Tennessee	105.5	101.7	85.5	85.7	89.1	87.2	81.3
West South Central	**95.9**	**84.3**	**74.9**	**72.7**	**73.9**	**74.9**	**66.4**
Arkansas	114.0	95.6	87.2	85.0	89.5	89.5	78.1
Louisana	81.9	77.0	66.1	66.8	66.6	64.0	59.3
Oklahoma	120.6	103.5	95.3	84.6	91.6	91.5	83.2
Texas	91.5	80.2	70.4	69.5	69.1	71.5	62.4
Mountain	**131.0**	**103.9**	**94.0**	**84.1**	**87.0**	**86.3**	**85.5**
Arizona	77.3	59.1	54.6	53.1	51.9	49.1	50.9
Colorado	147.2	119.8	99.7	92.2	98.1	94.3	95.7
Idaho	110.7	79.5	81.3	69.8	71.6	79.1	74.1
Montana	171.2	126.1	123.7	99.6	108.0	117.9	109.0
Nevada	113.2	87.5	73.2	68.1	69.1	70.6	69.0
New Mexico	126.6	99.1	84.4	85.2	85.1	80.0	83.8
Utah	180.1	139.0	134.9	108.2	109.4	113.9	106.7
Wyoming	161.7	128.6	122.7	97.4	108.7	111.8	107.7
Pacific	**109.9**	**81.6**	**75.6**	**67.2**	**65.5**	**66.5**	**65.2**
Alaska	221.3	216.9	205.8	179.8	181.2	194.2	198.8
California	109.4	80.5	73.6	65.7	63.3	63.9	62.5
Hawaii	29.1	25.0	20.3	19.6	19.1	19.3	19.3
Oregon	107.0	79.8	83.5	67.6	74.2	76.6	75.6
Washington	122.0	95.5	94.0	81.9	87.7	93.2	90.3

a. Customer data are based on yearly averages.
R–Revised.

TABLE 9-14
AVERAGE CONSUMER PRICE INDEXES, 1970-1990[a]

(1982–1984 = 100)

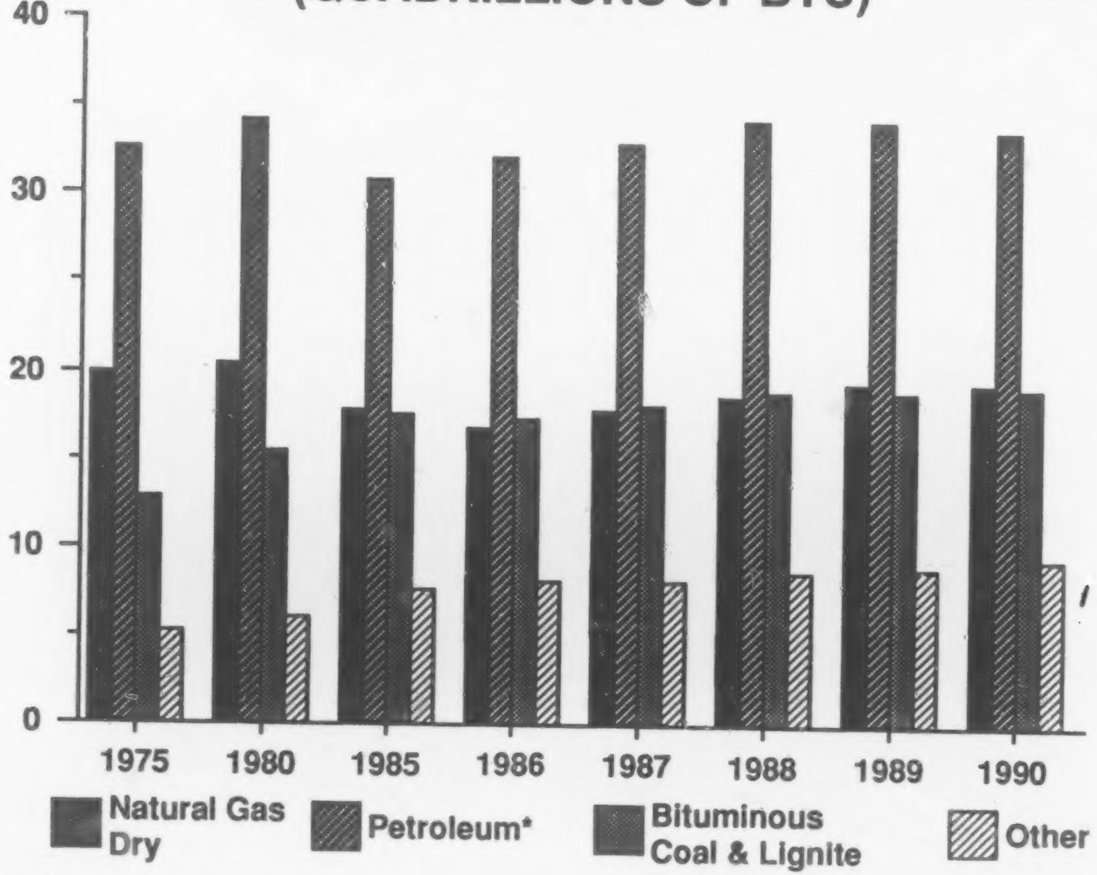
Year	All Items	Total Food	Apparel and Upkeep	Shelter[b]	Gas and Electricity	Fuel Oil and Other Utilities[c]	Year	House Furnishing[d] and Operation	Trans-portation	Medical Care	Personal Care	Other Goods and Services[e]
1970	38.8	39.9	59.2	35.5	25.4	29.1	1970	46.8	37.5	34.0	43.5	40.9
1971	40.5	40.9	61.1	37.0	27.1	31.1	1971	48.6	39.5	36.1	44.9	42.9
1972	41.8	42.7	62.3	38.7	28.5	32.5	1972	49.7	39.9	37.3	46.0	44.7
1973	44.4	49.7	64.6	40.5	29.9	34.3	1973	51.1	41.2	38.8	48.1	46.4
1974	49.3	57.1	69.4	44.4	34.5	40.7	1974	56.8	45.8	42.4	52.8	49.8
1975	53.8	61.8	72.5	48.8	40.1	45.4	1975	63.4	50.1	47.5	57.9	53.9
1976	56.9	63.1	75.2	51.5	44.7	49.4	1976	67.3	55.1	52.0	61.7	57.0
1977	60.6	66.8	78.6	54.9	50.5	54.7	1977	70.4	59.0	57.0	65.7	60.4
1978	65.2	73.8	81.4	60.5	55.0	58.5	1978	74.7	61.7	61.8	69.9	64.3
1979	72.6	81.8	84.9	68.9	61.0	64.8	1979	79.9	70.5	67.5	75.2	68.9
1980	82.4	88.4	90.9	81.0	71.4	75.4	1980	86.3	83.1	74.9	81.9	75.2
1981	90.9	94.8	95.3	90.5	81.9	86.4	1981	93.0	93.2	82.9	89.1	82.6
1982	96.5	98.1	97.8	96.9	93.2	94.9	1982	98.0	97.0	92.5	95.4	91.1
1983	99.6	99.1	100.2	99.1	101.5	100.2	1983	100.2	99.3	100.6	100.3	101.1
1984	103.9	102.8	102.1	104.0	105.4	104.8	1984	101.9	103.7	106.8	104.3	107.9
1985	107.6	104.3	105.0	109.8	107.1	106.5	1985	103.8	106.4	113.5	108.3	114.5
1986	109.6	107.3	105.9	115.8	105.7	104.1	1986	105.2	102.3	122.0	111.9	121.4
1987	113.6	111.9	110.6	121.3	103.8	103.0	1987	107.1	105.4	130.1	115.1	128.5
1988	118.3	11[illegible].6	115.4	127.1	104.6	104.4	1988	109.4	108.7	138.6	119.4	137.0
1989	124.0	12[illegible].2	118.6	132.8	107.5	107.8	1989	111.2	114.1	149.3	125.0	147.7
1990	130.7	132.3	124.1	140.0	109.3	111.6	1990	113.3	120.5	162.8	130.4	159.0

a. Applicable to all urban consumers in the United States.
b. Includes hotel and motel rates.
c. Starting in 1978 includes bottled gas.
d. Includes house furnishings only prior to 1969.
e. Prior to 1978 included alcoholic beverages, now found in food and beverages; now includes personal care and education—related expenses, formerly found in health and recreation.

Source: Bureau of Labor Statistics. *The Consumer Price Index*, 1990.

CHART 10-1

UNITED STATES ENERGY CONSUMPTION
(QUADRILLIONS OF BTU)



REFERENCE: TABLE 10-1

* Includes Natural Gas Liquids

GAS FACTS

TABLE 10-7

HEATING DEGREE DAYS[a] BY CALENDAR YEAR AND HEATING SEASONS, 1990-1991, AND THIRTY-YEAR NORMALS

	Calendar Year Degree Days			Heating Season Degree Days[b]		
Division and State	30-Year[c] Normals 1951-1980	1989	1990	30-Year[c] Normals 1951/52-1980/81	1989-1990	1990-1991
United States	**4,694**	**4,875**	**4,127**	**3,798**	**3,633**	**3,462**
New England	**6,562**	**6,853**	**5,815**	**5,071**	**5,091**	**4,527**
Connecticut	6,146	6,263	5,206	4,839	4,733	4,190
Maine	7,945	8,532	7,445	5,892	6,203	5,568
Massachusetts	6,322	6,663	5,645	4,913	4,947	4,378
New Hampshire	7,599	7,820	6,762	5,752	5,798	5,193
Rhode Island	5,968	6,095	5,126	4,629	4,535	4,025
Vermont	7,979	8,553	7,391	6,045	6,198	5,664
Middle Atlantic	**5,820**	**6,143**	**5,007**	**4,661**	**4,520**	**4,115**
New Jersey	5,424	5,686	4,579	4,422	4,251	3,843
New York	5,943	6,258	5,135	4,730	4,614	4,170
Pennsylvania	5,881	6,260	5,083	4,708	4,549	4,203
East North Central	**6,375**	**6,831**	**5,678**	**5,131**	**4,956**	4,693
Illinois	6,175	6,691	5,540	5,083	4,884	4,733
Indiana	5,871	6,267	5,137	4,815	4,594	4,356
Michigan	6,823	7,240	6,151	5,363	5,248	4,880
Ohio	5,897	6,323	5,107	4,766	4,580	4,229
Wisconsin	7,665	8,194	7,006	6,004	5,834	5,691
West North Central	**6,657**	**7,005**	**6,023**	**5,419**	**5,139**	**5,088**
Iowa	6,932	7,264	6,286	5,663	5,380	5,449
Kansas	4,988	5,177	4,546	4,271	4,059	3,926
Minnesota	8,771	9,238	7,974	6,855	6,553	6,497
Missouri	5,091	5,471	4,482	4,344	4,101	3,958
Nebraska	6,435	6,686	6,012	5,261	5,005	5,048
North Dakota	9,481	9,789	8,550	7,277	6,727	6,829
South Dakota	7,714	7,984	6,142	6,091	5,659	5,732
South Atlantic	**2,999**	**3,070**	**2,328**	**2,603**	**2,377**	**2,172**
Delaware	4,784	4,926	3,778	4,007	3,733	3,355
District of Columbia	d	d	d	d	d	d
Florida	720	642	416	713	597	468
Georgia	2,788	2,707	2,124	2,507	2,226	2,094
Maryland	4,811[e]	5,032[e]	3,865[e]	4,034[e]	3,776[e]	3,454[e]
North Carolina	3,481	3,576	2,668	3,043	2,750	2,535
South Carolina	2,7[illegible]3	2,746	2,026	2,495	2,200	2,064
Virginia	4,5[illegible]2	4,594	3,796	3,661	3,431	3,142
West Virginia	5,250	5,555	4,468	4,270	4,070	3,779
East South Central	**3,555**	**3,715**	**2,930**	**3,109**	**2,906**	**2,703**
Alabama	2,828	2,889	2,226	2,549	2,348	2,154
Kentucky	4,544	4,760	3,797	3,861	3,589	3,388
Mississippi	2,510	2,660	2,042	2,308	2,189	2,023
Tennessee	3,954	4,165	3,324	3,422	3,228	3,296
West South Central	**2,313**	**2,472**	**1,977**	**2,142**	**2,042**	**1,990**
Arkansas	3,327	3,520	2,834	2,991	2,739	2,723
Louisiana	1,794	1,879	1,908	1,703	1,615	1,497
Oklahoma	3,571	3,788	3,190	3,213	3,021	2,979
Texas	2,035	2,199	1,748	1,908	1,848	1,806
Mountain	**5,529**	**5,423**	**5,375**	**4,182**	**4,026**	**4,214**
Arizona	2,313	1,890	2,168	2,037	1,903	1,983
Colorado	7,123	7,326	7,145	5,192	5,193	5,228
Idaho	6,935	7,048	6,665	5,061	4,753	5,209
Montana	8,260	8,319	7,721	5,822	5,317	5,612
Nevada	4,263	3,990	4,152	3,373	3,147	3,481
New Mexico	4,756	4,385	4,674	3,842	3,833	3,836
Utah	6,555	6,495	6,259	4,966	4,685	5,231
Wyoming	8,023	8,015	7,774	5,744	5,487	5,691
Pacific	**3,322**	**3,076**	**3,164**	**2,432**	**2,283**	**2,443**
Alaska	f	f	f	f	f	f
California	2,703	2,420	2,553	2,060	1,924	2,057
Hawaii	f	f	f	f	f	f
Oregon	5,255	5,222	5,108	3,573	3,433	3,668
Washington	5,637	5,474	5,423	3,840	3,604	3,877

a. See glossary for definitions of (heating) degree days. Division heating degree days are the weighted average of all states in a region, according to the 1980 population. National heating degree days are the weighted average of all divisions, according to the 1980 population.

b. Heating season is defined as November through March period.

c. The transference of many weather stations between city locations and nearby airports at some time during the 30 year period has led to the introduction of slight inconsistencies in the average data.

d. Included in Maryland.

e. Includes the District of Columbia.

f. Not available.

Source: National Oceanic and Atmospheric Administration, *Monthly State, Regional and National Heating Degree Days Weighted by Population.*

TABLE 10-8
GAS UTILITY INDUSTRY AVERAGE ANNUAL CONSUMPTION PER CUSTOMER BY STATE AND CLASS OF SERVICE, 1990[a]

(MMBtu/Customer)

		Class of Service				
Division and State	Total	Residential	Commercial	Industrial	Electric Generation	Other
United States	**181.4**	**89.7**	**516.3**	**11,416.7**	**2,545,669.5**	**3,570.8**
New England	**190.0**	**92.2**	**573.2**	**7,247.5**	**2,619,400.0**	**736.0**
Connecticut	192.0	94.4	581.5	7,721.1	327,200.0	1,194.0
Maine	262.2	54.1	395.1	24,721.5	b	b
Massachusetts	194.0	90.4	604.6	6,962.1	3,836,000.0	735.8
New Hampshire	188.3	94.4	494.8	7,557.4	b	1,094.6
Rhode Island	147.1	97.6	478.1	3,550.1	0.0	7,670.0
Vermont	281.6	109.2	486.8	112,913.6	686,500.0	75.1
Middle Atlantic	**150.0**	**94.8**	**482.7**	**7,240.5**	**2,008,630.8**	**2,809.7**
New Jersey	161.1	89.1	523.1	9,225.1	2,870,250.0	10,857.1
New York	135.8	90.4	435.1	4,344.2	2,847,647.0	2,524.5
Pennsylvania	164.0	107.2	510.2	11,849.6	98,250.0	4,362.2
East North Central	**173.7**	**121.9**	**536.8**	**4,554.1**	**85,347.5**	**2,228.0**
Illinois	174.9	131.0	490.9	2,970.9	111,554.2	95.0
Indiana	180.9	110.5	541.1	8,105.9	212,500.0	2,191.5
Michigan	172.9	130.2	588.9	2,873.1	13,492.9	0.0
Ohio	164.3	116.8	547.4	5,511.1	41,466.7	2,489.0
Wisconsin	186.0	102.1	533.9	6,883.4	157,488.9	26,733.3
West North Central	**176.9**	**102.6**	**581.0**	**10,658.8**	**23,002.1**	**1,750.3**
Iowa	189.0	101.2	512.4	19,450.1	70,670.4	1,495.3
Kansas	160.5	96.6	570.6	3,451.6	3,698.9	851.7
Minnesota	211.1	112.8	678.0	12,577.6	60,573.9	3,842.9
Missouri	148.2	99.2	588.1	16,972.2	8,737.9	1,796.7
Nebraska	186.4	100.7	526.5	12,464.0	29,055.6	902.4
North Dakota	185.8	111.1	651.2	8,233.3	14,000.0	0.0
South Dakota	176.6	98.9	495.3	8,724.5	b	b
South Atlantic	**202.6**	**75.5**	**549.4**	**18,333.6**	**3,404,829.3**	**504.2**
Delaware	225.6	84.5	557.8	39,011.7	549,300.0	38,000.0
District of Columbia	212.6	94.0	1,276.7	b	b	b
Florida	462.3	29.4	777.3	121,249.6	5,921,214.3	1,632.4
Georgia	144.1	75.8	447.5	19,468.6	323,233.3	123.0
Maryland	153.7	85.1	531.4	3,891.5	3,183,933.3	6,442.9
North Carolina	223.6	72.4	429.1	22,409.6	161,000.0	1,024.6
South Carolina	256.2	57.3	401.3	44,184.7	211,000.0	565.6
Virginia	174.5	81.1	666.1	9,637.8	439,000.0	1,078.3
West Virginia	158.5	111.4	471.8	35,580.6	528,850.0	1,217.0
East South Central	**178.5**	**79.5**	**456.3**	**22,152.9**	**144,516.7**	**1,034.4**
Alabama	151.1	71.4	453.7	16,762.0	240,600.0	239.0
Kentucky	150.2	93.1	416.2	10,739.9	b	3,340.7
Mississippi	185.1	68.8	353.3	32,226.3	40,433.3	1,834.4
Tennessee	232.4	81.3	537.1	29,542.3	0.0	211.5
West South Central	**286.8**	**66.4**	**415.2**	**61,775.4**	**16,300,115.6**	**11,468.5**
Arkansas	152.8	78.1	360.2	19,328.3	b	23,830.8
Louisiana	217.4	59.3	329.0	59,132.7	2,071,314.3	46,199.0
Oklahoma	241.6	83.2	398.4	45,058.7	391,300.0	1,364.1
Texas	339.4	62.4	452.2	88,940.6	25,257,400.0	4,950.1
Mountain	**145.7**	**85.5**	**534.6**	**8,626.6**	**284,181.8**	**3,934.3**
Arizona	129.7	50.9	517.0	23,691.5	1,464,514.3	8,486.0
Colorado	149.9	95.7	575.9	6,344.3	37,200.0	2,348.8
Idaho	126.9	74.1	340.9	6,626.0	b	500.0
Montana	195.7	109.0	522.9	14,218.7	18,000.0	22,596.5
Nevada	127.8	69.0	725.8	10,758.6	450,666.7	16,478.3
New Mexico	131.9	83.8	405.1	1,532.8	57,000.0	2,320.1
Utah	152.9	106.7	515.2	16,592.9	3,941.2	11,600.0
Wyoming	186.4	107.7	632.3	17,313.1	158,400.0	2,010.7
Pacific	**158.6**	**65.2**	**528.4**	**8,670.5**	**11,067,703.0**	**17,066.7**
Alaska	489.2	198.8	1,016.0	b	2,829,540.0	b
California	150.1	62.5	505.9	8,110.1	13,501,173.1	27,398.8
Hawaii	101.4	19.3	961.5	631.1	b	b
Oregon	152.4	75.6	437.6	21,344.7	5,000.0	b
Washington	261.7	90.3	657.1	15,625.9	51,000.0	5,133.8

a. Excludes customers purchasing for resale and sales for resale. Customer data are based on yearly averages.

b. No sales reported.

SECTION 11
APPLIANCE AND HOUSING DATA

	1990	% Change 90/89
Manufacturer Shipments		
(Thousands of Units)		
Central Heating	2,154	−8.5
Ranges	2,167	0.0
Water Heaters	3,907	−5.4
Clothes Dryers	1,002	−5.0
New One-Family Houses Completed		
(Thousands of Units)		
Gas Heat	572	−4.0

Note: Certain tables in this section could not be updated because current information was not available.

tABLE 11-1
MANUFACTURER SHIPMENTS OF GAS RANGES, WATER HEATERS AND CLOTHES DRYERS, 1970-1990[a]

(Thousands of Units)

Year	Domestic Range Sales			Automatic Domestic Water Heater Sales			Automatic Gas Dryers[c]
	Free-Standing[b]	Built-in	Total	Natural Gas	L.P. Gas	Total	
1970	2,195	167	2,362	2,404	381	2,785	852
1971	2,363	186	2,549	2,645	443	3,088	847
1972	2,467	194	2,661	2,676	487	3,163	936
1973	2,312	169	2,481	2,568	512	3,080	926
1974	1,825	125	1,950	2,210	359	2,569	739
1975	1,493	125	1,618	2,388	257	2,645	672
1976	1,693	131	1,824	2,695	417	3,112	707
1977	1,615	131	1,746	d	d	3,070	736
1978	1,665	129	1,794	2,578	343	2,921	757
1979	1,670	129	1,799	2,548	339	2,887	757
1980	1,437	102	1,539	2,498	320	2,818	682
1981	1,401	95	1,496	2,461	324	2,785	639
1982	1,289	79	1,368	2,771	270	3,041	584
1983	1,477	96	1,573	2,953	219	3,172	672
1984	1,626	106	1,732	3,281	221	3,502	754
1985	1,729	84	1,813	3,303	226	3,529	834
1986	1,854	86	1,940	3,485	244	3,729	936
1987	2,047	96	2,143	3,673	278	3,951	1,037
1988	2,016[e]	126[e]	2,226[e]	3,674	282	3,956	1,047[e]
1989	2,055[e]	112[e]	2,167[e]	3,845	285	4,130	1,052[e]
1990	2,061[e]	106[e]	2,167[e]	3,626	281	3,907	1,002[e]

a. Shows shipments by manufacturers, expanded from returns of reporting companies to represent industry-wide coverage. Shipments of appliances for L.P. gas users include those for use by customers obtaining such gas through utility mains, as well as bottled gas users.

b. Free-standing includes free-standing, "set-in" and high-oven ranges.

c. Excludes combination washer-dryer units.

d. Not Available.

e. Data not directly comparable to earlier years due to new source of information.

Source: Gas Appliance Manufacturers Association, *Statistical Highlights,* Ten Year Summary, 1981-1990 and Association of Home Appliance Manufacturers.

TABLE 11-2
MANUFACTURER SHIPMENTS OF GAS HEATING EQUIPMENT, 1970-1990[a]

(Thousands of Units)

	Central Heating Equipment					
Year	Warm Air Furnaces	Conversion Burners	Boilers	Total	Floor and Wall Furnaces Total[b]	Direct Heating Equipment Total
1970	1,471	66	164	1,701	545	781
1971	1,795	53	157	2,005	612	783
1972	2,066	40	156	2,262	762	708
1973	1,719	43	147	1,909	652	678
1974	1,476	89	123	1,688	409	488
1975	1,186	39	88	1,313	435	332
1976	1,554	26	113	1,693	523	306
1977	1,508	c	113	1,621	481	193
1978	1,636	c	126	1,762	532	175
1979	1,863	c	221	2,084	363	193
1980	1,446	c	293	1,739	297	222
1981	1,417	c	162	1,579	253	133
1982	1,156	c	148	1,304	260	182
1983	1,662	c	148	1,810	363	203
1984	1,849	c	180	2,029	391	256
1985	1,822	c	192	2,014	430	283
1986	2,105	c	196	2,301	427	281
1987	2,073	c	190	2,263	421	268
1988	2,092	c	211	2,303	429	294
1989	2,162	c	192	2,354	192[d]	305
1990	1,950	c	204	2,154	169	318

a. Shows shipments by manufacturers; expanded from returns of reporting companies to represent industry-wide coverage.
b. Includes RV central and wall furnaces.
c. Not available.
d. Does not include RV central and wall furnaces.
Source: Gas Applicance Manufacturers Association, *Statistical Highlights*, Ten Year Summary, 1981-1990.

TABLE 11-3
MANUFACTURER SHIPMENTS OF RESIDENTIAL GAS APPLIANCES, BY MONTH, 1990

(Thousands of Units)

	Ranges				Central Heating	
Month	Free-Standing[a]	Built-in	Automatic Water Heaters	Dryers[b]	Warm Air Furnaces	Boilers
January	174.7	10.0	318.1	109.5	156.5	14.1
February	152.5	8.9	323.8	79.6	124.1	8.8
March	180.7	10.8	360.0	80.8	136.2	10.7
April	172.3	9.0	327.7	72.6	123.6	7.3
May	168.7	8.3	308.5	78.1	129.0	7.6
June	174.5	9.6	323.5	82.9	145.4	13.8
July	159.9	7.1	294.2	80.2	166.9	11.0
August	160.3	7.2	298.8	82.0	187.6	23.3
September	182.6	7.9	287.1	83.6	219.5	25.6
October	199.6	9.2	377.6	93.3	216.5	32.2
November	176.3	9.6	315.4	81.9	192.4	28.1
December	158.6	8.6	371.6	77.6	152.8	21.4
Total	2,060.7	106.2	3,906.3	1,002.1	1,950.5	203.9

a. Free-standing includes free-standing, "set-in" and high-oven ranges.
b. Excludes combination washer-dryer units.
Source: Gas Appliance Manufacturers Association, *Statistical Highlights*, December 1990 and Association of Home Appliance Manufacturers.

TABLE 11-4
NUMBER OF OCCUPIED HOUSING UNITS,[a] BY TYPE OF HEATING FUEL AND BY CENSUS REGION, 1976-1987

(Thousands of Occupied Units)

Year and Region	Total	Gas	Electricity	Oil[b]	Other[c]/None
1976					
United States	**74,005**	**41,219**	**10,151**	**16,451**	**6,184**
Northeast	16,544	6,140	846	9,161	397
Midwest	19,722	13,803	1,366	3,004	1,549
South	23,742	11,449	5,498	3,488	3,307
West	13,998	9,826	2,441	798	933
1977					
United States	**75,280**	**41,543**	**11,146**	**16,060**	**6,531**
Northeast	16,637	6,151	958	9,103	425
Midwest	19,855	13,893	1,506	2,843	1,613
South	24,379	11,577	6,033	3,335	3,434
West	14,407	9,922	2,649	778	1,058
1978					
United States	**77,167**	**42,522**	**12,258**	**16,071**	**6,316**
Northeast	16,952	6,301	999	9,252	400
Midwest	20,171	14,140	1,685	2,817	1,529
South	25,093	11,956	6,561	3,263	3,313
West	14,951	10,125	3,013	739	1,074
1979					
United States	**78,572**	**43,323**	**13,244**	**15,708**	**6,297**
Northeast	17,122	6,558	1,109	9,056	399
Midwest	20,565	14,428	1,864	2,724	1,549
South	25,584	12,054	7,074	3,191	3,265
West	15,301	10,283	3,197	737	1,084
1980					
United States	**80,072**	**44,398**	**14,208**	**14,868**	**6,598**
Northeast	17,264	6,928	1,169	8,685	482
Midwest	20,842	14,688	2,036	2,503	1,615
South	26,286	12,290	7,615	3,009	3,372
West	15,680	10,492	3,388	671	1,129
1981					
United States	**83,175**	**46,084**	**15,486**	**14,494**	**7,111**
Northeast	17,851	7,335	1,281	8,642	593
Midwest	21,565	15,308	2,211	2,328	1,718
South	27,431	12,725	8,225	2,905	3,576
West	16,328	10,716	3,770	619	1,223
1983					
United States	**84,638**	**46,700**	**15,684**	**13,031**	**9,223**
Northeast	18,221	7,741	1,319	8,226	934
Midwest	21,618	15,656	2,172	1,774	2,015
South	27,931	12,346	8,557	2,559	4,470
West	16,868	10,956	3,635	472	1,805
1985					
United States	**88,425**	**45,328**	**18,361**	**12,441**	**12,295**
Northeast	18,729	7,339	1,642	7,998	1,750
Midwest	22,142	15,253	2,430	1,698	2,761
South	30,064	11,839	10,664	2,153	5,408
West	17,490	10,896	3,626	592	2,376
1987					
United States	**90,229**	**45,959**	**20,608**	**13,813**	**9,848**
Northeast	18,939	7,520	1,859	8,413	1,148
Midwest	22,246	15,462	2,647	1,758	2,379
South	31,068	11,853	11,977	2,852	4,387
West	17,976	11,124	4,125	791	1,935

a. Units include both single-family and multifamily.
b. Oil includes kerosene.
c. Other includes LP gas, coal, wood and solar heat.

Source: U.S. Bureau of the Census, Current Housing Reports—Series H-150. *Annual Housing Survey*. Part A: General Housing Characteristics. Publication name changed to *American Housing Survey* in 1990.

TABLE 11-5
NEW ONE FAMILY HOUSES[a] COMPLETED, BY TYPE OF HEATING FUEL AND BY CENSUS REGION, 1982-1990

(Thousands of Units)

Year and Region	Total	Gas	Electricity	Oil[b]	Other/None
1982					
United States	**632**	**252**	**315**	**17**	**48**
Northeast	79	28	27	14	10
Midwest	92	53	24	3	13
South	340	112	214	c	13
West	121	59	50	c	12
1983					
United States	**924**	**400**	**448**	**22**	**53**
Northeast	106	40	38	18	9
Midwest	142	92	35	c	13
South	476	163	296	c	15
West	200	105	79	c	16
1984					
United States	**1,025**	**460**	**492**	**24**	**49**
Northeast	129	53	46	21	9
Midwest	156	110	30	c	14
South	508	170	325	c	12
West	233	127	91	c	14
1985					
United States	**1,072**	**466**	**528**	**36**	**42**
Northeast	168	65	63	32	8
Midwest	151	111	31	c	7
South	514	146	354	c	11
West	239	144	79	c	16
1986					
United States	**1,118**	**526**	**496**	**51**	**45**
Northeast	193	80	59	47	7
Midwest	170	132	30	c	6
South	502	152	334	c	14
West	253	162	74	c	17
1987					
United States	**1,119**	**581**	**444**	**57**	**37**
Northeast	195	86	52	52	5
Midwest	201	166	26	3	6
South	464	154	302	c	8
West	258	175	64	c	19
1988					
United States	**1,085**	**587**	**402**	**60**	**36**
Northeast	188	85	43	57	3
Midwest	191	162	22	c	6
South	457	164	282	3	8
West	248	176	53	c	18
1989					
United States	**1,026**	**596**	**352**	**50**	**28**
Northeast	159	81	29	45	4
Midwest	191	163	22	c	5
South	420	158	252	3	7
West	257	194	49	c	13
1990					
United States	**964**	**572**	**318**	**47**	**27**
Northeast	125	56	24	42	3
Midwest	194	169	21	c	4
South	389	161	220	3	5
West	254	186	53	c	15

a. Includes only privately-owned housing units.
b. Does not include kerosene.
c. Withheld because estimate did not meet Bureau of the Census publication standards.
Source: U.S. Bureau of the Census, Construction Reports—Series C25, *Characteristics of New Housing*, 1990.

TABLE 11-6
UNITS[a] IN NEW MULTIFAMILY BUILDINGS COMPLETED, BY TYPE OF HEATING FUEL AND BY CENSUS REGION, 1982-1990

(Thousands of Units)

Year and Region	Total	Gas	Electricity	Oil[b]	Other/None
1982					
United States	**374**	**103**	**255**	**9**	**7**
Northeast	41	15	17	8	1
Midwest	51	32	17	c	2
South	199	21	176	c	1
West	82	34	45	c	3
1983					
United States	**467**	**133**	**327**	**3**	**4**
Northeast	33	21	9	c	d
Midwest	59	37	22	c	1
South	270	31	238	c	1
West	104	44	58	c	3
1984					
United States	**627**	**165**	**452**	**5**	**5**
Northeast	40	16	18	c	1
Midwest	65	34	32	c	d
South	358	46	312	c	d
West	164	70	90	c	4
1985					
United States	**631**	**197**	**425**	**3**	**5**
Northeast	46	25	17	3	1
Midwest	79	36	42	c	1
South	298	34	263	c	1
West	207	101	103	c	3
1986					
United States	**636**	**221**	**400**	**8**	**7**
Northeast	61	33	19	7	2
Midwest	100	43	56	c	1
South	259	33	224	1	1
West	216	112	101	c	3
1987					
United States	**545**	**222**	**306**	**5**	**12**
Northeast	60	35	18	5	2
Midwest	102	63	37	d	2
South	194	30	162	d	2
West	190	95	89	d	6
1988					
United States	**445**	**196**	**238**	**4**	**7**
Northeast	62	40	18	3	1
Midwest	89	56	32	d	1
South	138	20	118	d	d
West	156	80	70	d	5
1989					
United States	**397**	**167**	**215**	**5**	**11**
Northeast	60	38	16	4	1
Midwest	76	51	22	d	c
South	129	20	109	d	d
West	131	57	68	d	c
1990					
United States	**341**	**150**	**182**	**2**	**7**
Northeast	31	22	7	2	c
Midwest	66	50	16	d	d
South	122	20	100	1	1
West	122	59	59	d	4

a. Includes only privately-owned housing units.

b. Does not include kerosene.

c. Withheld because estimate did not meet Bureau of the Census publication standards.

d. Fewer than 500 units.

Source: U.S. Bureau of the Census, Construction Reports—Series C25, *Characteristics of New Housing*, 1990.

TABLE 11-7
NUMBER OF OCCUPIED HOUSING UNITS,[a] BY TYPE OF COOKING FUEL AND BY CENSUS REGION, 1975-1987

(Thousands of Occupied Units)

Year and Region	Total	Gas	Electricity	Oil[b]	Other[c]/None
1975					
United States	**72,523**	**32,493**	**33,944**	**76**	**6,011**
Northeast	16,508	9,244	5,973	27	1,264
Midwest	19,393	9,051	8,699	16	1,627
South	23,105	8,229	12,224	31	2,621
West	13,518	5,968	7,048	3	499
1976					
United States	**74,003**	**32,299**	**35,669**	**44**	**5,991**
Northeast	16,545	9,086	6,178	14	1,267
Midwest	19,722	8,978	9,165	7	1,572
South	23,741	8,179	12,897	22	2,643
West	13,996	6,057	7,429	1	509
1977					
United States	**75,280**	**32,207**	**37,042**	**45**	**5,986**
Northeast	16,635	9,096	6,280	17	1,242
Midwest	19,857	8,857	9,426	14	1,560
South	24,379	8,146	13,563	11	2,659
West	14,408	6,107	7,773	2	526
1978					
United States	**77,167**	**32,576**	**38,779**	**107**	**5,705**
Northeast	16,952	9,185	6,568	44	1,155
Midwest	20,171	8,847	9,833	32	1,459
South	25,094	8,242	14,234	24	2,594
West	14,950	6,302	8,144	7	497
1979					
United States	**78,572**	**32,551**	**40,345**	**84**	**5,593**
Northeast	17,123	9,162	6,752	42	1,166
Midwest	20,565	8,958	10,180	15	1,413
South	25,585	8,171	14,873	22	2,519
West	15,299	6,258	8,540	6	496
1980					
United States	**80,072**	**32,664**	**41,729**	**152**	**5,528**
Northeast	17,264	9,234	6,828	65	1,138
Midwest	20,842	8,898	10,516	30	1,398
South	26,286	8,196	15,531	37	2,521
West	15,680	6,336	8,852	20	471
1985					
United States	**88,425**	**33,794**	**49,057**	**153**	**5,421**
Northeast	18,729	9,526	7,874	20	1,309
Midwest	22,142	9,135	11,826	24	1,157
South	30,064	8,298	19,201	55	2,510
West	17,490	6,834	10,156	54	446
1987					
United States	**90,499**	**33,670**	**51,629**	**178**	**5,022**
Northeast	18,853	9,344	8,246	34	1,229
Midwest	22,179	8,967	12,045	41	1,126
South	31,163	8,176	20,652	68	2,267
West	18,304	7,183	10,686	35	400

a. Units include both single-family and multifamily.

b. Oil includes kerosene.

c. Other includes LP gas, coal and wood.

Sources: For 1974-1977, U.S. Bureau of the Census, Current Housing Reports—Series H-150, *Annual Housing Survey.* Part A. For 1978-1980, U.S. Bureau of the Census, Current Housing Reports—Series H-150, *Annual Housing Survey.* Part F: Energy-Related Housing Characteristics. Publication name changed to *American Housing Survey* in 1990.

TABLE 11-8
NUMBER OF OCCUPIED HOUSEHOLDS BY TYPE OF FUEL USED FOR WATER HEATING AND CLOTHES DRYING, AND BY CENSUS REGION, 1985

(Millions of Households)

Region	Total	Gas	Electricity	Oil[a]	Other[b]/None
Water Heating					
United States	**88.4**	**49.6**	**30.8**	**6.4**	**1.1**
Northeast	18.7	8.8	3.9	5.7	0.3
Midwest	22.1	16.0	5.8	0.1	0.2
South	30.1	12.9	16.1	0.5	0.2
West	17.5	12.0	5.0	0.1	0.4
Clothes Drying					
United States	**88.4**	**12.8**	**42.2**	c	**33.4**
Northeast	18.7	2.8	7.4	c	8.5
Midwest	22.1	5.0	10.0	c	7.1
South	30.1	2.1	16.7	c	11.3
West	17.5	2.9	8.1	c	6.5

NUMBER OF OCCUPIED HOUSEHOLDS BY TYPE OF FUEL USED FOR WATER HEATING AND CLOTHES DRYING, AND BY CENSUS REGION, 1987

(Millions of Households)

Water Heating					
United States	**90.5**	**49.3**	32.0	**5.3**	**3.9**
Northeast	19.0	9.0	4.5	5.1	0.3
Midwest	22.3	15.3	5.8	d	1.1
South	30.9	12.6	16.7	d	1.4
West	18.3	12.4	5.0	d	0.9
Clothes Drying					
United States	**90.5**	**12.9**	**45.9**	c	**31.7**
Northeast	19.0	3.1	8.1	c	7.8
Midwest	22.3	4.3	11.4	c	6.6
South	30.9	2.1	17.9	c	10.9
West	18.3	3.4	8.6	c	6.3

a. Oil includes kerosene.
b. Other includes LP gas, coal, wood and solar.
c. Not applicable.
d. Data withheld because of large variance.
Source: U.S. Department of Energy, Energy Information Administration, *Residential Energy Consumption Survey: Housing Characteristics, 1987.*

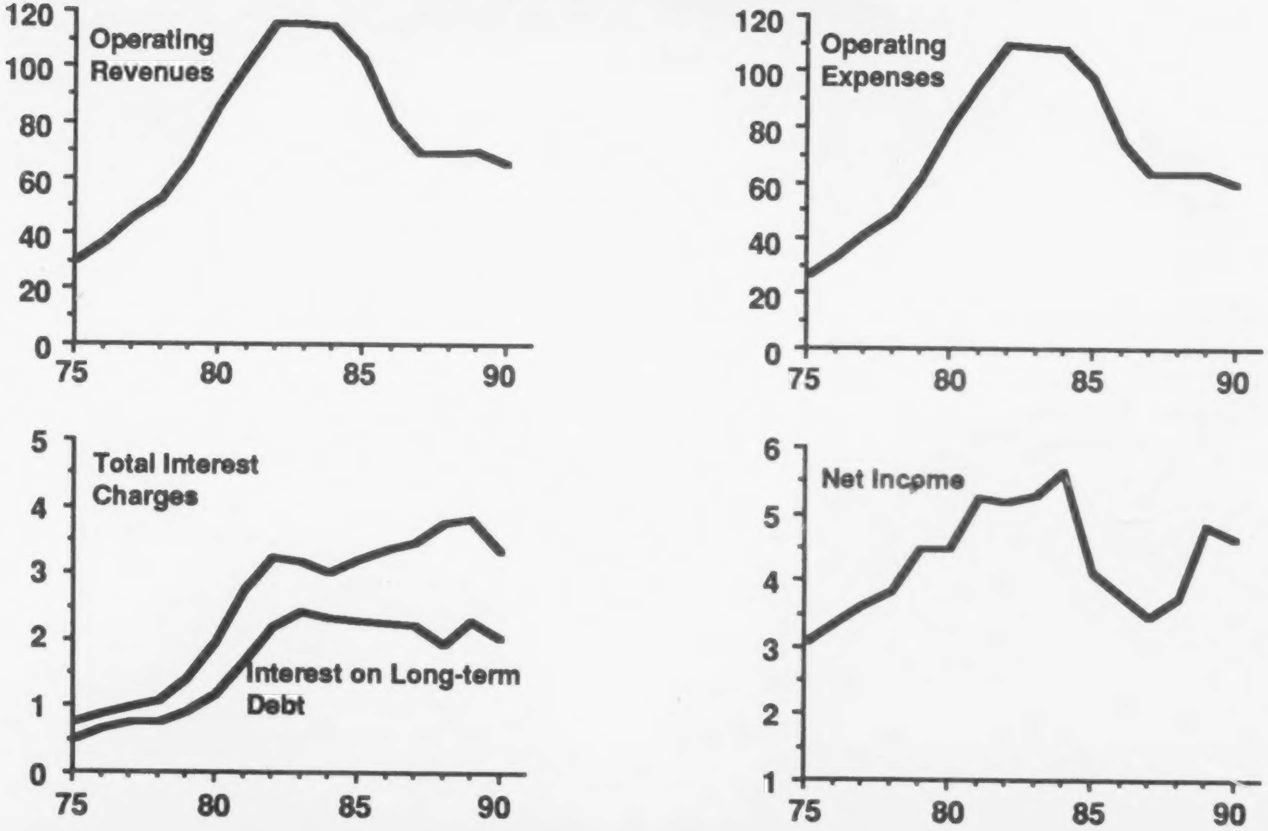
SECTION 12
INCOME ACCOUNTS

	1990	% Change 90/89
Total Operating Revenues		
(Millions)		
Total Industry	$66,049	− 6.1
Distribution	18,532	− 1.2
Transmission	21,756	− 8.9
Integrated	10,129	−12.2
Combination	15,632	− 3.4
Net Income		
(Millions)		
Total Industry	$ 4,411	− 5.0
Distribution	984	−10.3
Transmission	2,466	+ 8.6
Integrated	541	−15.2
Combination	420	−34.0

CHART 12-1

GAS UTILITY INDUSTRY COMPOSITE INCOME ACCOUNTS (INVESTOR-OWNED)

BILLIONS OF DOLLARS



REFERENCE: TABLE 12-1

TABLE 12-1
COMPOSITE INCOME ACCOUNTS
INVESTOR-OWNED GAS UTILITY INDUSTRY
TOTAL INDUSTRY[a], 1975–1990

(Millions)

	1975	1980	1985	1987	1988	1989	1990
Total Operating Revenues	$30,550	$85,918	$103,945	$69,566	$69,754	$70,363	$66,049
Operation Expenses	22,254	73,288	86,944	54,409	55,283	54,146	49,733
Maintenance Expenses	703	1,220	1,628	1,645	1,749	1,844	1,911
Total Operation and Maintenance Expenses	22,957	74,508	88,572	56,054	57,032	55,990	51,644
Depreciation, Retirements, Depletion, etc.	1,760	2,434	3,158	3,176	3,423	3,429	3,555
Federal Income Taxes	965	1,369	2,282	1,454	1,120	1,028	1,334
Provision for Deferred Federal Income Taxes	465	1,949	2,206	2,795	2,767	2,973	2,355
Portion of Current Federal Income Taxes Provided For in Prior Years	(252)	(1,406)	(1,676)	(1,196)	(2,789)	(2,476)	(2,059)
Investment Tax Credit Adjustment	130	213	238	(13)	(43)	(35)	(24)
Other Federal Taxes	109	202	355	360	388	412	431
State Income Taxes	116	200	314	238	243	289	264
Other State and Local Taxes	1,230	2,320	2,871	2,541	2,555	2,652	2,657
Total Taxes	2,763	4,847	6,590	5,179	4,241	4,843	4,958
Total Operating Expenses	27,480	81,789	98,320	64,409	64,696	64,262	60,157
Operating Income	3,070	4,129	5,625	5,157	5,058	6,101	5,892
Other Operating Income	21	23	140	159	4	2	a
Allowance for Funds Used During Construction	130	319	265	136	140	171	187
Utility Operating Income	3,221	4,471	6,030	5,452	5,202	6,274	6,079
Other Income (Non-Operating) (Net)	916	2,458	1,606	1,393	2,270	2,490	2,004
Income Before Interest Charges	4,137	6,929	7,636	6,845	7,472	8,764	8,083
Interest on Long-Term Debt	1,423	1,961	2,847	2,799	2,579	2,850	2,640
Amortization of Debt Disc. Exp. and Premium	12	15	25	85	69	123	69
Other Interest Expense (Net)	203	622	724	926	1,381	1,115	967
Total Interest Charges	1,638	2,598	3,596	3,810	4,029	4,088	3,676
Net Income Before Extraordinary Items	2,499	4,331	4,039	3,035	3,443	4,676	4,407
Extraordinary Items, Less Taxes	3	(137)	(255)	(64)	(91)	(35)	4
Net Income	2,502	4,194	3,785	2,971	3,352	4,641	4,411
Preferred Dividends	184	296	430	302	229	262	178
Common Dividends	1,325	2,268	3,630	3,151	2,922	2,851	3,014
Note:							
Number of Companies Reporting[b]	204	201	184	187	175	165	168
Op. Rev. of Companies Reporting (Millions)	$29,057	$79,896	$94,935	$64,626	$64,731	$65,533	$61,720

a. For combination companies, only gas operations are included.

b. Financial data of report companies expanded to represent total industry on the basis of operating revenues.

( ): Denotes negative.

Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

INCOME ACCOUNTS

TABLE 12-2
COMPOSITE INCOME ACCOUNTS INVESTOR-OWNED GAS UTILITY INDUSTRY DISTRIBUTION COMPANIES, 1984–1990

(Millions)

	1984	1985	1986	1987	1988	1989	1990
Total Operating Revenues	$17,366	$21,510	$18,352	$16,513	$16,665	$18,761	$18,532
Operation Expenses	14,370	17,387	14,384	12,687	12,670	14,142	13,865
Maintenance Expenses	294	420	425	430	440	515	518
Total Operation and Maintenance Expenses	14,664	17,807	14,809	13,117	13,110	14,657	14,383
Depreciation, Retirements, Depletion, etc.	397	571	625	629	687	840	942
Federal Income Taxes	388	345	429	433	381	340	329
Provision for Deferred Federal Income Taxes	139	250	214	205	222	265	263
Portion of Current Federal Income Taxes Provided For in Prior Years	(120)	(68)	(97)	(166)	(199)	(112)	(129)
Investment Tax Credit Adjustment	40	71	4	(11)	(21)	(23)	(23)
Other Federal Taxes	70	97	97	101	109	128	134
State Income Taxes	47	65	63	54	60	94	93
Other State and Local Taxes	837	1,122	1,028	937	920	927	935
Total Taxes	1,401	1,882	1,738	1,553	1,472	1,620	1,602
Total Operating Expenses	16,462	20,260	17,172	15,299	15,269	17,116	16,927
Operating Income	904	1,250	1,180	1,214	1,396	1,644	1,605
Other Operating Income	3	4	2	2	4	2	a
Allowance for Funds Used During Construction	11	9	9	15	22	26	24
Utility Operating Income	918	1,263	1,191	1,231	1,421	1,671	1,629
Other Income (Non-Operating) (Net)	94	121	(64)	29	129	140	159
Income Before Interest Charges	1,012	1,384	1,127	1,260	1,551	1,811	1,788
Interest on Long-Term Debt	327	456	448	460	469	591	621
Amortization of Debt Disc. Exp. and Premium	4	5	7	8	9	10	12
Other Intererst Expense (Net)	54	93	88	88	136	118	169
Total Interest Charges	385	554	543	556	614	719	802
Net Income Before Extraordinary Items [1]	627	829	584	704	937	1,092	986
Extraordinary Items, Less Taxes	a	2	105	9	13	5	(2)
Net Income	627	831	689	713	950	1,097	984
Preferred Dividends	31	44	39	30	31	38	36
Common Dividends	400	640	677	570	622	744	708
Note:							
Number of Companies Reporting	53	65	60	61	63	54	57
Op. Rev. of Companies Reporting (Millions)	$15,659	$19,424	$16,508	$15,254	$15,353	$17,381	$17,356

a. Less than $500,000.
( ): Denotes negative.
Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

TABLE 12-3
COMPOSITE INCOME ACCOUNTS INVESTOR-OWNED GAS UTILITY INDUSTRY TRANSMISSION COMPANIES, 1975–1990

(Millions)

	1975	1980	1985	1987	1988	1989	1990
Total Operating Revenues	$11,898	$41,604	$45,738	$27,275	$26,482	$23,883	$21,756
Operation Expenses	8,463	36,075	39,635	21,972	22,226	18,920	16,429
Maintenance Expenses	187	405	523	546	603	594	629
Total Operation and Maintenance Expenses	8,650	36,480	40,158	22,518	22,829	19,514	17,058
Depreciation, Retirements, Depletion, etc.	896	1,238	1,4[illegible]	1,461	1,537	1,228	1,1[illegible]1
Federal Income Taxes[a]	646	846	1,103	200	148	251	553
Provision for Deferred Federal Income Taxes	246	1,421	1,399	2,056	2,017	2,143	1,518
Portion of Current Federal Income Taxes Provided For in Prior Years	(221)	(1,069)	(1,189)	(1,457)	(2,171)	(1,970)	(1,399)
Investment Tax Credit Adjustment	48	77	49	1	(5)	4	1
Other Federal Taxes	22	52	92	89	102	96	95
State Income Taxes	52	92	101	66	72	89	85
Other State and Local Taxes	221	572	425	425	429	369	392
Total Taxes	1,014	1,991	1,980	1,380	592	981	1,245
Total Operating Expenses	10,560	39,709	43,587	25,359	24,958	21,723	19,484
Operating Income	1,338	1,895	2,151	1,916	1,524	2,159	2,272
Other Operating Income	a	3	125	151	a	a	a
Allowance for Funds Used During Construction	38	126	44	33	48	65	79
Utility Operating Income	1,376	2,024	2,320	2,100	1,572	2,225	2,351
Other Income (Non-Operating) (Net)	640	1,755	1,238	1,100	2,207	2,060	1,515
Income Before Interest Charges	2,016	3,779	3,558	3,200	3,779	4,285	3,866
Interest on Long-Term Debt	643	979	1,346	1,493	1,252	1,307	950
Amortization of Debt Disc. Exp. and Premium	7	8	9	59	46	96	37
Other Interest Expense (Net)	110	325	317	623	959	583	405
Total Intererst Charges	760	1,312	1,672	2,175	2,257	1,986	1,392
Net Income Before Extraordinary Items	1,256	2,467	1,886	1,025	1,522	2,299	2,474
Extraordinary Items, Less Taxes	0	(141)	(129)	(10)	(31)	(29)	(8)
Net Income	1,256	2,326	1,757	1,015	1,491	2,270	2,466
Preferred Dividends	79	142	164	152	88	63	26
Common Dividends	600	1,229	1,984	1,633	1,353	1,176	1,307
Note:							
Number of Companies Reporting	33	39	38	45	37	36	37
Op. Rev. of Companies Reporting (Millions)	$11,192	$37,971	$41,705	$24,457	$23,579	$21,194	$19,401

a. Less than $500,000.
( ): Denotes negative.
Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

TABLE 12-4
COMPOSITE INCOME ACCOUNTS
INVESTOR-OWNED GAS UTILITY INDUSTRY
INTEGRATED COMPANIES, 1984-1990

(Millions)

	1984	1985	1986	1987	1988	1989	1990
Total Operating Revenues	$25,599	$17,396	$12,348	$10,954	$11,254	$11,536	$10,129
Operation Expenses	21,043	14,281	9,765	8,465	8,637	8,693	7,533
Maintenance Expenses	432	306	273	262	277	293	303
Total Operation and Maintenance Expenses	21,475	14,587	10.038	8,727	8,914	8,986	7,836
Depreciation, Retirements, Depletion, etc.	682	571	373	441	479	584	619
Federal Income Taxes	714	441	171	440	294	140	63
Provision for Deferred Federal Income Taxes	156	238	343	186	146	201	217
Portion of Current Federal Income Taxes Provided For in Prior Years	(171)	(204)	(70)	(287)	(115)	(93)	(101)
Investment Tax Credit Adjustment	78	57	(5)	(3)	(9)	(7)	(8)
Other Federal Taxes	105	79	74	71	76	79	85
State Income Taxes	106	69	54	42	49	23	19
Other State and Local Taxes	905	511	465	429	452	555	549
Total Taxes	1,893	1,191	1,032	878	893	897	824
Total Operating Expenses	24,050	16,349	11,443	10,046	10,286	10,468	9,279
Operating Income	1,549	1,047	905	908	968	1,068	850
Other Operating Income	13	11	6	6	a	a	a
Allowance for Funds Used During Construction	9	7	6	9	9	9	27
Utility Operating Income	1,571	1,065	917	923	977	1,077	877
Other Income (Non-Operating) (Net)	419	162	206	208	15	267	413
Income Before Interest Charges	1,990	1,227	1,123	1,131	992	1,344	1,290
Interest on Long-Term Debt	634	501	355	356	349	366	431
Amortization of Debt Disc. Exp. and Premium	5	6	3	10	5	5	7
Other Interest Expense (Net)	119	274	166	172	228	335	311
Total Interest Charges	758	781	524	538	582	706	749
Net Income Before Extraordinary Items	1,232	446	599	593	410	638	541
Extraordinary Items, Less Taxes	(30)	25	14	21	14	0	0
Net Income	1,202	471	613	614	424	638	541
Preferred Dividends	127	99	38	34	36	28	33
Common Dividends	846	575	458	461	461	444	479
Note:							
Number of Companies Reporting	42	26	25	28	23	22	22
Op. Rev. of Companies Reporting (Millions)	$22,394	$14,743	$9,404	$10,243	$10,540	$10,801	$9,368

a. Less than $500,000.

( ): Denotes negative.

Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

TABLE 12-5
COMPOSITE INCOME ACCOUNTS INVESTOR-OWNED GAS UTILITY INDUSTRY COMBINATION COMPANIES, 1984–1990

(Millions)

	1984	1985	1986	1987	1988	1989	1990
Gas Operations							
Total Operating Revenues	$19,207	$19,301	$16,391	$14,824	$15,353	$16,183	$15,632
Operation Expenses	15,692	15,641	12,813	11,285	11,750	12,391	11,906
Maintenance Expenses	354	379	394	407	429	442	461
Total Operation and Maintenance Expenses	16,046	16,020	13,207	11,692	12,179	12,833	12,367
Depreciation, Retirements, Depletion, etc.	522	567	630	645	720	777	813
Federal Income Taxes	513	393	291	381	297	297	389
Provision for Deferred Federal Income Taxes	250	319	460	348	382	364	357
Portion of Current Federal Income Taxes Provided For in Prior Years	(309)	(215)	(289)	(286)	(304)	(300)	(430)
Investment Tax Credit Adjustment	95	61	14	b	(8)	(9)	6
Other Federal Taxes	82	87	97	99	101	109	117
State Income Taxes	82	79	72	76	62	83	67
Other State and Local Taxes	786	813	786	750	754	801	781
Total Taxes	1,499	1,537	1,431	1,368	1,284	1,345	1,287
Total Operating Expenses	18,067	18,124	15,268	13,705	14,183	14,955	14,467
Operating Income[a]	1,140	1,177	1,123	1,119	1,170	1,228	1,165
Total Operations							
Total Operating Revenues	$62,035	$63,647	$58,917	$56,839	$60,730	$61,993	$64,056
Operation Expenses	36,616	36,773	31,748	29,841	31,965	33,236	34,561
Maintenance Expenses	3,852	3,589	3,438	3,680	4,089	3,966	4,184
Total Operation and Maintenance Expenses	39,916	40,362	35,186	33,521	36,054	37,202	38,745
Depreciation, Retirements, Depletion, etc.	3,852	4,210	4,334	4,658	5,399	6,159	5,402
Federal Income Taxes	1,864	1,972	2,475	2,466	2,161	2,015	2,396
Provision for Deferred Federal Income Taxes	2,502	2,477	3,180	3,010	2,993	2,978	2,728
Portion of Current Federal Income Taxes Provided For in Prior Years	(1,129)	(884)	(1,136)	(1,623)	(2,330)	(2,722)	(1,989)
Investment Tax Credit Adjustment	925	790	40	21	(101)	(84)	(31)
Other Federal Taxes	380	401	410	450	483	483	524
State Income Taxes	538	466	489	430	457	470	478
Other State and Local Taxes	4,014	4,213	4,231	4,254	4,567	4,668	4,848
Total Taxes	9,095	9,435	9,689	9,008	8,230	7,809	8,954
Total Operating Expenses	52,863	54,007	49,208	47,187	49,683	51,170	53,101
Operating Income	9,172	9,640	9,708	9,652	11,046	10,822	10,955
Other Operating Income	1	1	31	13	b	b	b
Allowance for Funds Used During Construction	2,568	2,578	1,937	1,122	880	818	569
Utility Operating Income	11,741	12,219	11,676	10,787	11,927	11,640	11,524
Other Income (Non-Operating) (Net)	745	968	1,158	423	(443)	8	(447)
Income Before Interest Charges	12,486	13,187	12,834	11,210	11,484	11,648	11,077
Interest on Long-Term Debt	4,718	5,155	4,971	4,728	4,948	4,942	5,114
Amortization of Debt Disc. Exp. and Premium	21	53	62	79	92	96	110
Other Interest Expense (Net)	383	302	322	372	415	536	537
Total Interest Charges	5,122	5,510	5,355	5,179	5,455	5,574	5,761
Net Income Before Extraordinary Items	7,364	7,677	7,479	6,031	6,029	6,074	5,316
Extraordinary Items, Less Taxes	15	749	(206)	(1,079)	(1,365)	(52)	199
Net Income	7,379	6,928	7,273	4,952	4,664	6,022	5,515
Preferred Dividends	1,022	1,006	914	778	719	1,070	704
Common Dividends	4,045	4,388	4,425	4,609	4,639	4,270	4,230
Note:							
Number of Companies Reporting	54	55	54	53	52	53	52
Total Op. Revenues of Companies Reporting (Millions)	$60,980	$62,862	$58,444	$56,258	$60,358	$61,891	$63,904
Gas Revenues of Companies Reporting (Millions)	$18,880	$19,063	$16,260	$14,672	$15,259	$16,157	$15,595

a. Includes "Other Operating Income" which was less than $500,000 in each year.
b. Less than $500,000.
( ): Denotes negative.
Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

INCOME ACCOUNTS

TABLE 12-6
INVESTOR-OWNED GAS UTILITY INDUSTRY
GAS OPERATION AND MAINTENANCE EXPENSES
BY TYPE OF COMPANY, 1989-1990

(Millions)

Total Industry	1989[R]		1990	
Type of Expense	Operation	Maintenance	Operation	Maintenance
Purchased Gas Cost and Production Exp.	$39,194	$ 0	$35,669	$ 0
Other Production and Purch. Exp. and Adjustments	2,475	114	1,309	104
Production and Purchases, Total	41,669	114	36,978	104
Storage	624	100	589	105
Transmission	2,730	515	2,780	587
Distribution	1,672	1,023	1,763	1,015
Customer Accounts	1,885	a	1,791	0
Sales	218	0	224	0
Administrative and General	4,992	92	5,198	100
Customer Service	356	0	410	0
Total	54,146	1,844	49,733	1,911

Distribution Companies Type of Expense	Operation	Maintenance	Operation	Maintenance
Purchased Gas Cost and Production Exp.	$10,894	$ 0	$10,512	$ 0
Other Production and Purch. Exp. and Adjustments	112	7	92	6
Production and Purchases, Total	11,006	7	10,604	6
Storage	57	24	61	26
Transmission	56	14	59	13
Distribution	735	435	770	434
Customer Accounts	737	0	748	0
Sales	113	0	112	0
Administrative and General	1,307	35	1,344	39
Customer Service	131	0	167	0
Total	14,142	515	13,865	518

Transmission Companies Type of Expense	Operation	Maintenance	Operation	Maintenance
Purchased Gas Cost and Production Exp.	$12,120	$ 0	$10,948	$ 0
Other Production and Purch. Exp. and Adjustments	2,080	75	921	62
Production and Purchases, Total	14,200	75	11,869	62
Storage	458	44	409	45
Transmission	2,208	465	2,187	513
Distribution	0	0	0	0
Customer Accounts	197	0	52	0
Sales	28	0	31	0
Administrative and General	1,824	10	1,876	9
Customer Service	5	0	5	0
Total	18,920	594	16,429	629

Integrated Companies Type of Expense	Operation	Maintenance	Operation	Maintenance
Purchased Gas Cost and Production Exp.	$ 6,507	$ 0	$ 5,117	$ 0
Other Production and Purch. Exp. and Adjustments	107	17	163	18
Production and Purchases, Total	6,614	17	5,280	18
Storage	61	18	66	17
Transmission	248	32	290	34
Distribution	363	207	390	212
Customer Accounts	418	a	431	0
Sales	39	0	38	0
Administrative and General	883	19	949	22
Customer Service	67	0	89	0
Total	8,693	293	7,533	303

Combination Companies Type of Expense	Operation	Maintenance	Operation	Maintenance
Purchased Gas Cost and Production Exp.	$ 9,673	$ 0	$ 9,092	$ 0
Other Production and Purch. Exp. and Adjustments	176	17	133	18
Production and Purchases, Total	9,849	17	9,225	18
Storage	48	15	53	17
Transmission	218	25	244	27
Distribution	574	356	603	369
Customer Accounts	533	0	560	0
Sales	38	0	43	0
Administrative and General	978	29	1,029	30
Customer Service	153	0	149	0
Total	12,391	442	11,906	461

a. Less than $500,000.

R–Revised.

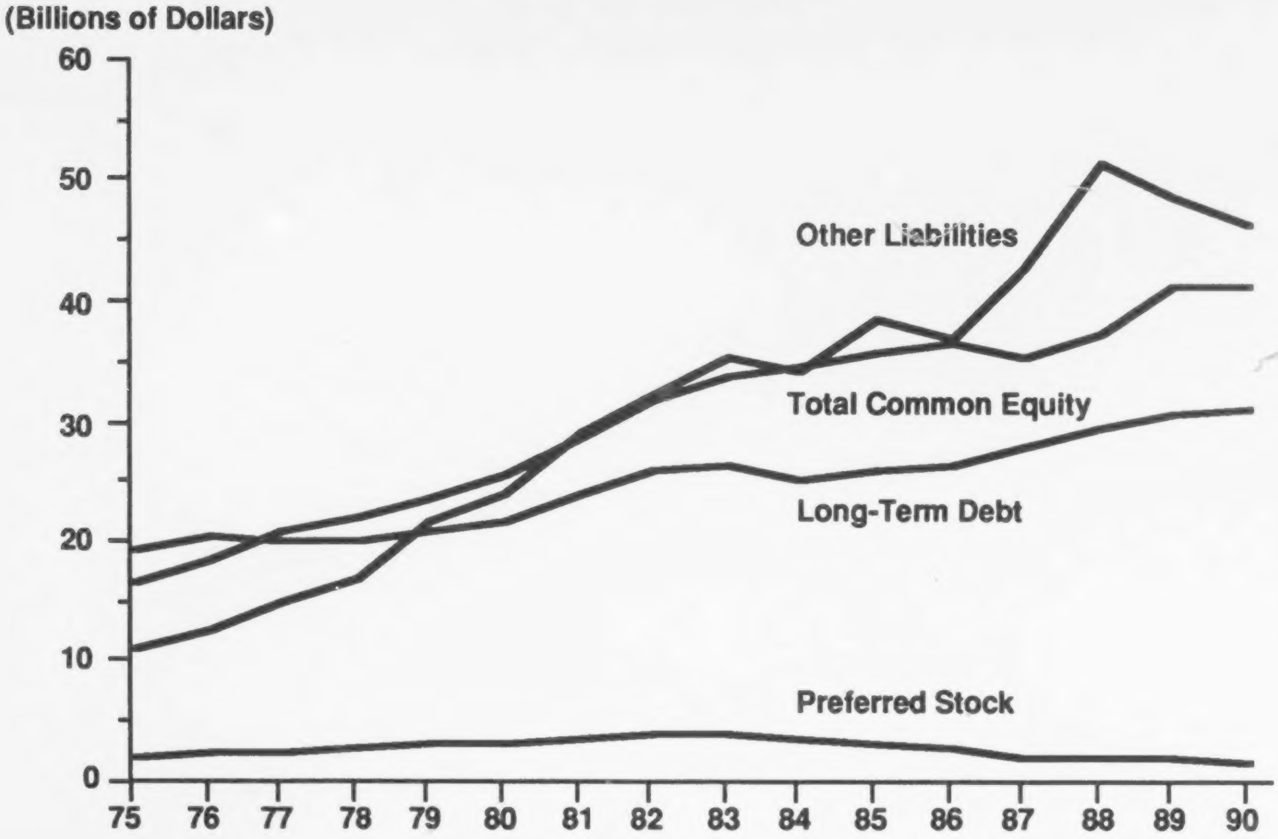
Note: See note previous page.

SECTION 13
BALANCE SHEETS

	1990	% Change 90/89
Gas Utility Plant (Millions)		
Total Industry	$112,894	+ 6.5
Distribution	26,953	+ 7.4
Transmission	45,233	+ 4.0
Integrated	18,554	+10.7
Combination	22,154	+ 7.1
Total Common Equity (Millions)		
Total Industry	$ 41,717	0.0
Distribution	8,597	+ 7.8
Transmission	20,748	− 7.7
Integrated	5,918	+16.1
Combination	6,454	+ 4.6

CHART 13-1

GAS UTILITY INDUSTRY INVESTMENT
(INVESTOR-OWNED)

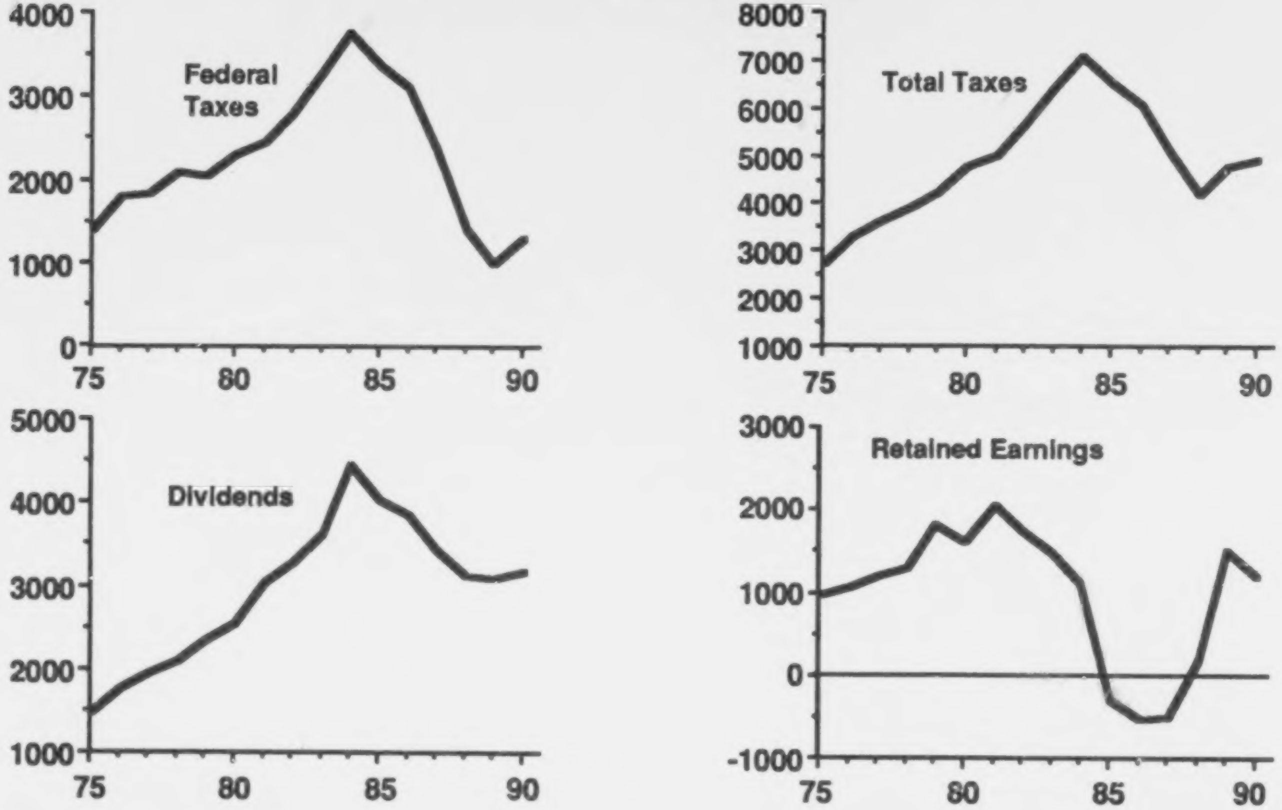


REFERENCE: TABLE 13-1

CHART 12-2

GAS UTILITY INDUSTRY DISPOSITION OF NET INCOME AND TAXES (INVESTOR-OWNED)

MILLIONS OF DOLLARS



REFERENCE: TABLE 12-1

BALANCE SHEETS

TABLE 13-1
COMPOSITE BALANCE SHEET ACCOUNTS
INVESTOR-OWNED GAS UTILITY INDUSTRY
TOTAL INDUSTRY, 1975–1990

(Millions)

	1975	1980	1985	1987	1988	1989	1990
ASSETS							
Total Gas Utility Plant	$49,384	$67,071	$86,547	$93,540	$99,933	$106,017	$112,894
Less Accum. Prov. for Depr. and Amort.	16,779	26,162	36,377	41,162	44,423	47,054	49,500
Net Gas Utility Plant (Total)	32,605	40,909	50,170	52,378	55,510	58,963	63,394
Gas Stored Underground (Non-Current)[a]	0	0	1,574	1,694	1,545	1,546	1,592
Investment and Fund Accounts	9,198	15,530	23,871	25,660	31,552	28,111	23,895
Current and Accrued Assets	7,543	17,243	24,771	21,025	23,402	24,836	23,279
Deferred Debits[b]	940	2,169	4,092	8,633	9,658	10,364	9,603
Total Assets	50,286	75,851	104,478	109,390	121,667	123,820	121,763
LIABILITIES							
Common Stock	5,803	6,968	7,739	7,466	7,732	7,794	7,548
Retained Earnings	7,911	13,122	18,893	15,993	17,253	18,909	17,792
Other Paid-in Capital[c]	3,245	5,597	9,450	12,387	12,739	15,023	16,376
Total Common Equity	16,959	25,687	36,082	35,846	37,724	41,726	41,717
Preferred Stock	2,541	3,628	3,435	2,366	2,174	2,163	2,122
Total Capital Stock	19,500	29,315	39,517	38,212	39,898	43,889	43,839
Bonds	10,493	9,574	9,378	10,778	10,814	10,995	11,922
Debentures	5,174	5,819	7,739	7,881	9,274	11,021	8,776
Other Long-Term Debt	3,877	6,674	9,165	9,441	9,889	8,848	10,466
Total Long-Term Debt	19,544	22,067	26,282	28,100	29,977	30,864	31,164
Total Capitalization	39,044	51,382	65,799	66,312	69,875	74,753	75,003
Current and Accrued Liabilities	8,158	18,119	26,125	26,664	33,735	31,005	29,562
Deferred Credits	752	1,683	3,779	4,693	4,896	4,870	4,285
Non-Current Liabilities[d]	194	428	879	1,694	2,372	1,788	1,457
Contributions in Aid of Construction	86	90	127	126	104	112	84
Accumulated Deferred Income Taxes[e]	2,052	4,149	7,769	9,901	10,685	11,292	11,371
Total Liabilities	50,286	75,851	104,478	109,390	121,667	123,820	121,763

a. First year this category is broken out is 1985.
b. Includes "Capital Stock Discount and Expense" and "Reacquired Securities."
c. Includes accounts formerly detailed in "Premiums, Assessments, etc." and "Capital Surplus."
d. Formerly called "Operating Reserves."
e. Includes "Reserves for Deferred Income Taxes."
Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

TABLE 13-2
COMPOSITE BALANCE SHEET ACCOUNTS INVESTOR-OWNED GAS UTILITY INDUSTRY DISTRIBUTION COMPANIES, 1984–1990

(Millions)

	1984	1985	1986	1987	1988	1989	1990
ASSETS							
Total Gas Utility Plant	$11,980	$17,383	$17,911	$19,320	$20,988	$25,098	$26,953
Less Accum. Prov. for Depr. and Amort.	3,971	5,631	5,833	6,277	6,728	8,192	8,796
Net Gas Utility Plant (Total)	8,009	11,752	12,078	13,043	14,260	16,906	18,157
Gas Stored Underground (Non-Current)[a]	0	124	145	127	101	176	171
Investment and Fund Accounts	659	1,136	758	909	1,141	1,127	1,193
Current and Accrued Assets	3,317	4,864	4,054	3,845	4,342	4,844	4,796
Deferred Debits	180	334	386	479	809	918	960
Total Assets	12,165	18,210	17,421	18,403	20,653	23,971	25,277
LIABILITIES							
Common Stock	805	1,205	1,189	1,340	1,439	2,113	2,174
Retained Earnings	1,921	2,917	2,467	2,461	3,343	3,676	3,881
Other Paid-in Capital	1,076	1,502	1,762	2,094	2,041	2,184	2,542
Total Common Equity	3,802	5,624	5,418	5,895	6,823	7,973	8,597
Preferred Stock	336	441	382	391	389	515	495
Total Capital Stock	4,138	6,065	5,800	6,286	7,212	8,488	9,092
Bonds	1,950	2,756	2,963	2,950	3,493	4,413	4,577
Debentures	345	537	700	914	1,105	1,115	1,104
Other Long-Term Debt	839	1,171	1,189	1,198	1,313	1,142	1,404
Total Long-Term Debt	3,134	4,464	4,852	5,062	5,911	6,670	7,085
Total Capitalization	7,272	10,529	10,652	11,348	13,123	15,158	16,177
Current and Accrued Liabilities	3,294	5,054	4,186	4,314	4,660	5,457	5,684
Deferred Credits	642	969	923	973	960	1,175	1,127
Non-Current Liabilities[b]	28	54	43	54	169	132	146
Contributions in Aid of Construction	67	116	123	117	94	100	59
Accumulated Deferred Income Taxes[c]	862	1,488	1,494	1,597	1,647	1,949	2,084
Total Liabilities	12,165	18,210	17,421	18,403	20,653	23,971	25,277

a. First year this category is broken out is 1985.

b. Formerly called "Operating Reserves."

c. Includes "Reserves for Deferred Income Taxes."

Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

BALANCE SHEETS

TABLE 13-3
COMPOSITE BALANCE SHEET ACCOUNTS INVESTOR-OWNED GAS UTILITY INDUSTRY TRANSMISSION COMPANIES, 1975-1990

(Millions)

	1975	1980	1985	1987	1988	1989	1990
ASSETS							
Total Gas Utility Plant	$20,351	$30,334	$39,076	$42,810	$45,800	$43,478	$45,233
Less Accum. Prov. for Depr. and Amort.	8,636	14,361	21,126	25,132	26,874	25,518	26,162
Net Gas Utility Plant (Total)	11,714	15,973	17,950	17,678	18,926	17,960	19,071
Gas Stored Underground (Non-Current)[a]	0	0	868	958	837	835	885
Investment and Fund Accounts	6,791	11,998	14,914	21,295	27,579	22,535	18,481
Current and Accrued Assets	3,459	8,432	14,494	12,288	13,493	13,115	11,886
Deferred Debits[b]	516	1,371	2,311	6,305	6,672	6,779	5,248
Total Assets	22,480	37,774	50,537	58,524	67,507	61,224	55,571
LIABILITIES							
Common Stock	1,984	2,610	2,694	2,066	2,172	1,627	1,140
Retained Earnings	4,010	7,984	11,102	9,339	10,340	10,980	9,551
Other Paid-in Capital[c]	1,891	3,414	5,008	8,159	8,421	9,877	10,056
Total Common Equity	7,885	14,008	18,804	19,564	20,933	22,484	20,748
Preferred Stock	1,012	1,734	1,361	494	299	218	192
Total Capital Stock	8,897	15,742	20,165	20,058	21,232	22,702	20,940
Bonds	3,125	2,398	900	1,917	1,325	1,162	1,800
Debentures	3,124	3,732	5,529	5,515	6,482	6,718	4,160
Other Long-Term Debt	2,167	4,114	5,117	5,529	5,548	4,491	5,150
Total Long-Term Debt	8,415	10,244	11,546	12,961	13,355	12,271	11,111
Total Capitalization	17,312	25,986	31,711	33,019	34,587	34,973	32,050
Current and Accrued Liabilities	3,802	9,067	13,028	16,603	23,137	17,625	16,049
Deferred Credits	295	495	998	2,053	1,838	1,629	1,203
Non-Current Liabilities[d]	113	174	580	1,424	1,963	1,458	1,109
Contributions in Aid of Construction	0	0	5	1	4	5	22
Accumulated Deferred Income Taxes[e]	959	2,052	4,215	5,424	5,978	5,534	5,137
Total Liabilities	22,480	37,774	50,537	58,524	67,507	61,224	55,571

a. First year this category is broken out is 1985.
b. Includes "Capital Stock Discount and Expense."
c. Includes accounts formerly detailed in "Premiums, Assessments, etc." and "Capital Surplus."
d. Formerly called "Operating Reserves."
e. Includes "Reserves for Deferred Income Taxes."
Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

TABLE 13-4
COMPOSITE BALANCE SHEET ACCOUNTS INVESTOR-OWNED GAS UTILITY INDUSTRY INTEGRATED COMPANIES, 1984-1990

(Millions)

	1984	1985	1986	1987	1988	1989	1990
ASSETS							
Total Gas Utility Plant	$19,033	$14,203	$12,236	$13,808	$14,380	$16,760	$18,554
Less Accum. Prov. for Depr. and Amort.	6,875	5,743	4,305	5,079	5,493	7,028	7,534
Net Gas Utility Plant (Total)	12,158	8,460	7,931	8,729	8,887	9,732	11,020
Gas Stored Underground (Non-Current)[a]	0	442	371	415	410	339	342
Investment and Fund Accounts	6,057	7,354	2,520	2,887	2,028	3,339	3,008
Current and Accrued Assets	5,315	3,726	3,180	3,293	3,873	4,790	4,446
Deferred Debits	447	538	390	583	833	858	1,605
Total Assets	23,977	20,520	14,392	15,907	16,031	19,058	20,421
LIABILITIES							
Common Stock	2,174	1,808	1,497	1,932	1,874	1,548	1,646
Retained Earnings	4,252	3,058	2,110	2,307	1,765	2,206	2,220
Other Paid-in Capital	1,903	1,766	1,223	798	837	1,342	2,052
Total Common Equity	8,329	6,632	4,830	5,037	4,476	5,096	5,918
Preferred Stock	770	439	398	451	448	359	361
Total Capital Stock	9,099	7,071	5,228	5,488	4,924	5,455	6,279
Bonds	2,307	1,352	1,179	1,344	1,337	397	319
Debentures	2,546	1,537	1,299	1,265	1,438	2,857	3,047
Other Long-Term Debt	1,538	1,940	1,715	1,605	1,657	1,582	2,232
Total Long-Term Debt	6,391	4,829	4,193	4,214	4,432	4,837	5,598
Total Capitalization	15,490	11,900	9,421	9,702	9,356	10,292	11,877
Current and Accrued Liabilities	5,731	6,401	3,424	4,056	4,206	5,823	5,562
Deferred Credits	938	982	596	691	895	832	677
Non-Current Liabilities[b]	83	133	22	59	97	55	70
Contributions in Aid of Construction	48	c	c	c	c	c	c
Accumulated Deferred Income Taxes[d]	1,687	1,104	929	1,399	1,477	2,056	2,235
Total Liabilities	23,977	20,520	14,392	15,907	16,031	19,058	20,421

a. First year this category is broken out is 1985.
b. Formerly called "Operating Reserves."
c. Less than $500,000.
d. Includes "Reserves for Deferred Income Taxes."
Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

TABLE 13-5
COMPOSITE BALANCE SHEET ACCOUNTS INVESTOR-OWNED GAS UTILITY INDUSTRY COMBINATION COMPANIES, 1984-1990

(Millions)

	1984	1985	1986	1987	1988	1989	1990
ASSETS							
Electric	$127,337	$107,117	$110,397	$123,697	$138,238	$134,262	$142,288
Gas	14,837	15,552	16,723	17,240	18,358	20,220	21,591
Other	5,102	5,338	6,162	7,995	6,218	6,545	6,932
Total Utility Plant	147,276	128,007	133,282	148,932	162,814	161,027	170,811
Construction Work in Progress[a]	0	32,611	26,248	17,411	12,802	9,740	7,555
Less Accum. Prov. for Depr. and Amort.	35,225	38,898	40,329	43,738	49,401	51,720	55,992
Net Utility Plant	112,051	121,720	119,201	122,605	126,215	119,047	122,374
Gas Stored Underground (Non-Current)[b]	0	140	148	194	197	196	194
Decommissioning Funds[c]	0	0	0	0	0	0	670
Investment and Fund Accounts	4,098	4,686	5,093	5,322	7,456	9,090	9,692
Current and Accrued Assets	15,923	16,921	15,919	14,967	15,711	17,086	17,189
Deferred Debits	9,335	9,124	10,161	11,851	12,463	14,816	14,299
Total Assets	141,407	152,591	150,522	154,939	162,042	160,235	164,418
LIABILITIES							
Common Stock	18,364	20,382	18,995	19,913	20,833	20,524	20,677
Retained Earnings	16,754	18,218	18,895	17,651	16,736	16,761	17,096
Other Paid-in Capital	10,887	11,780	12,396	12,508	13,357	13,268	13,789
Total Common Equity	46,005	50,380	50,286	50,072	50,926	50,553	51,562
Preferred Stock	12,258	11,980	10,413	9,637	9,620	8,769	8,588
Total Capital Stock	58,263	62,360	60,699	59,709	60,546	59,322	60,150
Bonds	41,905	43,834	41,573	42,739	43,196	41,123	41,759
Debentures	1,103	1,361	1,962	1,753	2,312	3,531	3,717
Other Long-Term Debt	8,317	9,394	9,587	10,375	12,712	13,372	13,420
Total Long-Term Debt	51,325	54,589	53,122	54,867	58,220	58,026	58,896
Total Capitalization	109,588	116,949	113,821	114,576	118,766	117,348	119,046
Current and Accrued Liabilities	15,285	16,477	16,139	15,826	16,063	17,194	18,786
Deferred Credits	7,091	8,326	7,925	9,135	11,152	10,110	10,210
Non-Current Liabilities[d]	1,644	1,123	1,222	1,471	1,330	1,170	1,052
Contribution in Aid of Construction	61	64	76	72	53	57	26
Accumulated Deferred Income Taxes[e]	7,738	9,652	11,339	13,859	14,678	14,356	15,298
Total Liabilities	141,407	152,591	150,522	154,939	162,042	160,235	164,418

a. First year this category is broken out is 1985. Formerly included under the corresponding plant category.
b. First year this category is broken out is 1985.
c. First year this category is broken out is 1990.
d. Formerly called "Operating Reserves."
e. Includes "Reserves for Deferred Income Taxes."
Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

TABLE 13-6
TOTAL GAS UTILITY INDUSTRY PLANT BY TYPE OF COMPANY AND BY PLANT FUNCTION, 1975–1990

(Millions)

	1975	1980	1985	1987	1988	1989	1990
Total Industry							
Total Gas Utility Plant	**$51,004**	**$69,275**	**$88,717**	**$95,952**	**$103,949**	**$108,396**	**$116,051**
Production	4,776	8,199	10,511	8,827	8,771	7,773	7,518
Underground Storage	2,697	4,529	4,305	4,500	4,739	4,656	5,344
Other Storage	700	672	717	659	486	435	442
LNG	a	284	262	285	475	709	778
Transmission	20,530	25,418	33,969	36,448	39,092	41,156	44,156
Distribution	19,151	24,923	33,397	38,628	42,833	45,158	47,665
General and Intangible[b]	2,226	3,470	4,438	5,076	5,725	6,263	7,116
Construction Work in Progress	924	1,780	1,118	1,529	1,828	2,246	2,733
Plant Held for Future Use[c]							299
Total Investor-Owned Industry							
Total Gas Utility Plant	**$49,384**	**$67,071**	**$86,547**	**$93,540**	**$99,933**	**$105,556**	**$112,894**
Production	4,687	8,019	10,347	8,573	8,442	7,482	7,208
Underground Storage	2,639	4,451	4,286	4,478	4,686	4,633	5,319
Other Storage	648	632	617	558	452	418	426
LNG	a	273	241	264	417	602	663
Transmission	20,307	25,298	33,930	36,402	38,990	41,107	44,098
Distribution	18,080	23,343	31,906	36,967	39,821	43,161	45,461
General and Intangible[b]	2,125	3,334	4,155	4,857	5,398	6,007	6,827
Construction Work in Progress	896	1,721	1,065	1,441	1,727	2,146	2,593
Plant Held for Future Use[c]							299
Distribution Companies							
Total Gas Utility Plant	**$8,547**	**$10,990**	**$17,383**	**$19,320**	**$20,988**	**$25,098**	**$26,953**
Production	387	539	656	629	625	478	538
Underground Storage	460	627	572	556	571	851	1,014
Other Storage	172	140	200	183	149	128	133
LNG	a	91	151	162	253	221	277
Transmission	425	338	581	536	631	1,051	1,608
Distribution	6,452	8,569	13,720	15,454	16,671	20,121	20,451
General and Intangible[b]	479	599	1,308	1,526	1,742	1,844	2,490
Construction Work in Progress	173	87	195	274	346	404	439
Plant Held for Future Use[c]							3
Transmission Companies							
Total Gas Utility Plant	**$20,351**	**$30,334**	**$39,076**	**$42,810**	**$45,800**	**$43,478**	**$45,233**
Production	2,650	5,098	7,204	6,301	6,305	5,237	4,855
Underground Storage	1,299	2,340	2,325	2,571	2,904	2,424	2,529
Other Storage	113	175	143	156	123	130	130
LNG	a	160	41	37	40	29	29
Transmission	15,322	20,194	27,400	31,464	33,727	32,546	34,227
Distribution	5	7	6	5	5	7	0
General and Intangible[b]	587	1,204	1,583	1,704	2,007	2,020	2,068
Construction Work in Progress	375	1,156	374	572	689	1,085	1,253
Plant Held for Future Use[c]							142
Integrated Companies							
Total Gas Utility Plant	**$10,960**	**$13,756**	**$14,203**	**$13,808**	**$14,380**	**$16,760**	**$18,554**
Production	1,240	1,914	1,937	1,097	978	1,244	1,270
Underground Storage	531	961	916	881	728	876	1,260
Other Storage	62	103	85	43	0	0	0
LNG	a	14	5	5	41	254	256
Transmission	3,418	3,308	4,026	2,736	2,873	5,205	5,751
Distribution	4,809	6,191	6,338	7,877	8,543	7,653	8,172
General and Intangible[b]	748	1,029	733	936	931	1,332	1,502
Construction Work in Progress	151	236	163	233	286	196	337
Plant Held for Future Use[c]							6
Combination Companies							
Total Gas Utility Plant	**$9,526**	**$11,991**	**$15,885**	**$17,602**	**$18,765**	**$20,220**	**$22,154**
Production	410	468	550	546	534	523	545
Underground Storage	348	523	473	470	483	482	516
Other Storage	301	214	189	176	180	160	163
LNG	a	8	44	60	83	98	101
Transmission	1,144	1,458	1,923	1,666	1,759	2,305	2,512
Distribution	6,816	8,576	11,842	13,631	14,602	15,380	16,838
General and Intangible[b]	310	502	531	691	718	811	767
Construction Work in Progress	197	242	333	362	406	461	564
Plant Held for Future Use[c]							148

a. Not available.
b. Includes plant acquisition adjustments and plant adjustments.
c. First year this category is broken out is 1990.
Note: Data not directly comparable from year to year due to acquisitions and mergers. See page ix.

SECTION 14
ANALYTICAL RATIOS

	1990	% Change 90/89
Capitalization Represented by (%)		
Long-term Debt	41.6	+ 0.6
Preferred Stock	2.8	− 2.1
Common Equity	55.6	− 0.4

The analytical ratios in this section have been calculated on a consistent basis for all years. These ratios are considered to be an acceptable set of indicators which provide trends on the condition of the investor-owned gas utility industry. Please contact the statistics department at A.G.A. for details of the formulas used to calculate these analytical ratios.

ANALYTICAL RATIOS

TABLE 14-1
SELECTED COMPOSITE ANALYTICAL RATIOS
INVESTOR-OWNED GAS UTILITY INDUSTRY
TOTAL INDUSTRY, 1975-1990

	1975	1980	1985	1987	1988	1989	1990
Earnings							
Utility Operating Income as % of Total Plant	6.5	6.7	7.0	5.8	5.2	5.8	5.4
Utility Operating Income as % of Net Plant	9.9	10.9	12.0	10.4	9.1	10.4	9.6
Operating Revenue as % of Total Plant	61.9	128.1	120.1	74.4	69.8	66.4	58.5
Common Dividend Payout Ratio	57.2	58.2	108.2	118.1	93.6	65.1	71.2
Return on Common Equity	13.7	15.2	9.3	7.4	8.3	10.5	10.1
Return on Average Common Equity	14.3	15.8	9.5	7.3	8.5	11.0	10.1
Return on Net Plant	7.1	9.5	6.7	5.1	5.6	7.4	6.7
Pretax Coverage of:							
Total Interest Expense[a]	3.3	3.5	3.0	2.3	2.1	2.5	2.6
Long-Term Debt Interest Expense[a]	3.8	4.6	3.8	3.2	3.3	3.4	3.6
Allowance for Funds Used During Construction as % of Net Income	5.2	7.6	7.0	4.6	4.2	3.7	4.2
Expenses							
Operating Expenses as % of Operating Revenue	90.0	95.2	94.6	92.6	92.7	91.4	91.1
Maintenance Expenses as % of Total Plant	1.4	1.8	1.9	1.8	1.8	1.7	1.7
Depreciation Expenses as % of Total Plant	3.6	3.6	3.7	3.4	3.4	3.2	3.1
Depreciation Expenses as % of Depreciable Plant	3.6	4.1	3.7	3.5	3.5	3.3	3.3
Total Taxes as % of Total Plant	5.6	7.2	7.6	5.5	4.2	4.6	4.4
Total Taxes as % of Net Plant	8.5	11.8	13.1	9.9	7.6	8.2	7.8
Total Taxes as % of Net Income plus Total Taxes	53.9	53.6	63.5	63.5	55.9	51.1	52.9
Current Federal Income Tax as % of Net Income plus current Federal Income Tax[b]	30.4	27.4	40.0	32.7	24.3	17.6	22.9
Plant							
Total Plant as % of Total Operating Revenue	161.6	78.1	83.3	134.5	143.3	150.7	170.9
Net Plant as % of Total Operating Revenue	106.7	47.6	48.3	75.3	79.6	83.8	96.0
Depreciation Reserve as % of Total Plant	34.0	39.0	42.0	44.0	44.5	44.4	43.8
Depreciation Reserve as % of Depreciable Plant	35.8	44.0	43.1	45.1	45.4	44.8	45.6
Total Plant per Employee ($000)	251.6	328.1	423.2	477.2	521.0	551.6	587.6
Capitalization							
Long-term Debt as % of Net Plant	59.4	53.9	52.4	53.6	54.0	52.3	49.2
% Total Capitalization Represented by:							
a. Long-term Debt	50.1	42.9	40.0	42.4	42.9	41.3	41.6
b. Preferred Stock	6.5	7.1	5.2	3.6	3.1	2.9	2.8
c. Common Equity	43.4	50.0	54.8	54.0	54.0	55.8	55.6
% Current Year Financing of Construction Expenditures Represented by:							
a. Internal Sources	53.8	55.3	71.8	62.4	64.8	63.1	60.5
b. Equity Issues	11.9	11.2	7.9	5.8	6.2	4.3	6.4
c. Debt Issues	34.3	33.5	20.3	31.8	29.0	32.6	33.1

a. Reflects pre-federal income tax coverage.

b. Includes "Investment Tax Credit Adjustment."

TABLE 14-2
SELECTED COMPOSITE ANALYTICAL RATIOS INVESTOR-OWNED GAS UTILITY INDUSTRY DISTRIBUTION COMPANIES, 1984-1990

	1984	1985	1986	1987	1988	1989	1990
Earnings							
Utility Operating Income as % of Total Plant	7.7	7.3	6.6	6.4	6.7	6.6	6.0
Utility Operating Income as % of Net Plant	11.5	10.7	9.9	9.4	9.8	9.7	8.8
Operating Revenue as % of Total Plant	145.0	123.7	102.5	85.5	79.4	74.8	68.8
Common Dividend Payout Ratio	67.1	81.3	104.2	83.5	67.7	70.3	74.7
Return on Common Equity	15.7	14.0	12.0	11.6	13.5	13.3	11.0
Return on Average Common Equity	16.3	a	a	12.1	a	a	a
Return on Net Plant	7.4	6.7	5.4	5.2	6.4	6.3	5.2
Pretax Interest Coverage of:							
Total Interest Expense[b]	3.8	3.6	3.1	3.1	3.2	3.2	2.8
Long-Term Debt Interest Expense[b]	4.5	4.3	3.7	3.7	4.1	3.6	3.4
Allowance for Funds Used During Construction as % of Net Income	1.8	1.1	1.3	2.1	2.3	2.4	2.5
Expenses							
Operating Expenses as % of Operating Revenue	94.8	94.2	93.6	92.6	91.6	91.2	91.3
Maintenance Expenses as % of Total Plant	2.5	2.4	2.4	2.2	2.1	2.1	1.9
Depreciation Expenses as % of Total Plant	3.3	3.3	3.5	3.3	3.3	3.4	3.5
Depreciation Expenses as % of Depreciable Plant	3.4	3.4	3.6	3.3	3.3	2.9	3.6
Total Taxes as % of Total Plant	11.7	10.8	9.7	8.0	7.0	6.5	5.9
Total Taxes as % of Net Plant	17.5	16.0	14.4	11.9	10.3	9.6	8.8
Total Taxes as % of Net Income plus Total Taxes	69.1	69.4	71.6	68.5	60.8	59.6	61.9
Current Federal Income Tax as % of Net Income plus current Federal Income Tax[c]	40.6	33.4	38.6	37.2	27.5	22.4	23.7
Plant							
Total Plant as % of Total Operating Revenue	69.0	80.8	97.6	117.0	125.9	133.8	145.4
Net Plant as % of Total Operating Revenue	46.1	54.6	65.8	79.0	85.6	90.1	98.0
Depreciation Reserve as % of Total Plant	33.1	32.4	32.6	32.5	32.1	32.6	32.6
Depreciation Reserve as % of Depreciable Plant	33.9	33.2	33.1	33.2	32.8	28.6	33.9
Total Plant per Employee ($000)	259.2	281.3	301.9	325.0	352.3	391.7	420.5
Capitalization							
Long-term Debt as % of Net Plant	39.1	38.0	40.2	38.8	41.4	39.5	39.0
% Total Capitalization Represented by:							
a. Long-term Debt	43.1	42.4	45.5	44.6	45.0	44.0	43.8
b. Preferred Stock	4.6	4.2	3.6	3.4	3.0	3.4	3.1
c. Common Equity	52.3	53.4	50.9	52.0	52.0	52.6	53.1
% Current Year Financing of Construction Expenditures Represented by:							
a. Internal Sources	78.0	73.1	52.9	56.9	47.4	67.6	60.7
b. Equity Issues	7.3	4.9	7.9	14.6	14.4	7.1	8.3
c. Debt Issues	14.7	22.0	39.2	28.5	38.2	25.2	31.0

a. Not available.
b. Reflects pre-federal income tax coverage.
c. Includes "Investment Tax Credit Adjustment."

ANALYTICAL RATIOS

TABLE 14-3
SELECTED COMPOSITE ANALYTICAL RATIOS INVESTOR-OWNED GAS UTILITY INDUSTRY TRANSMISSION COMPANIES, 1975-1990

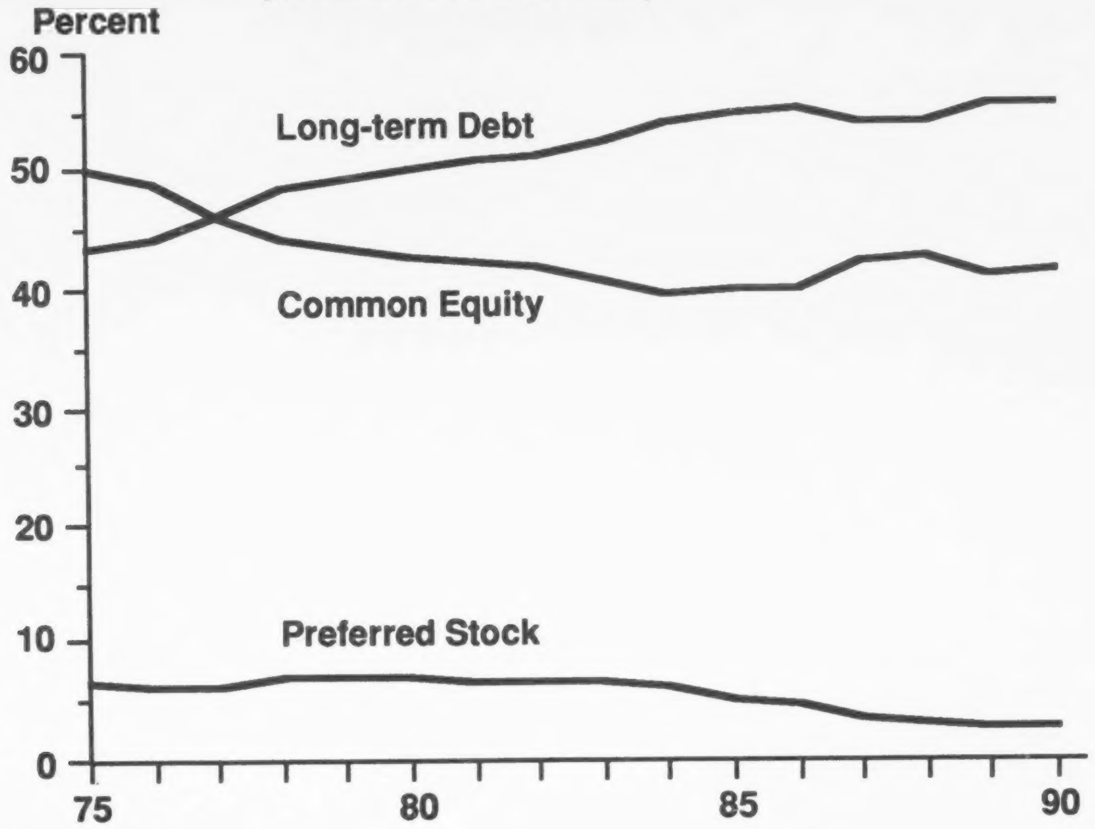
	1975	1980	1985	1987	1988	1989	1990
Earnings							
Utility Operating Income as % of Total Plant	6.8	6.7	5.9	4.9	3.3	5.0	5.0
Utility Operating Income as % of Net Plant	11.7	12.7	12.9	11.9	8.1	12.0	11.9
Operating Revenue as % of Total Plant	58.5	137.2	117.0	63.7	57.8	54.9	48.1
Common Dividend Payout Ratio	50.9	56.3	124.5	189.2	96.4	53.3	53.5
Return on Common Equity	14.9	15.6	8.5	4.4	6.7	9.8	11.8
Return on Average Common Equity	15.8	16.4	8.5	4.2	6.9	b	11.3
Return on Net Plant	10.1	13.8	8.9	4.9	7.4	12.3	12.8
Pretax Coverage of:							
Total Interest Expense[a]	3.6	3.9	2.9	1.8	1.7	2.4	3.3
Long-Term Debt Interest Expense[a]	4.3	5.2	3.7	2.7	3.0	3.5	4.6
Allowance for Funds Used During Construction of % of Net Income	3.0	5.4	2.5	3.3	3.2	2.9	3.2
Expenses							
Operating Expenses as % of Operating Revenue	88.8	95.4	95.3	93.0	94.2	91.2	75.5
Maintenance Expenses as % of Total Plant	0.9	1.3	1.3	1.3	1.3	1.4	1.4
Depreciation Expenses as % of Total Plant	4.4	4.1	3.8	3.4	3.4	2.8	2.6
Depreciation Expenses as % of Depreciable Plant	4.4	4.5	3.8	3.5	3.4	3.1	2.7
Total Taxes as % of Total Plant	5.0	6.6	5.1	3.2	1.3	2.3	2.7
Total Taxes as % of Net Plant	8.6	12.5	11.0	7.8	3.1	5.5	6.5
Total Taxes as % of Net Income plus Total Taxes	44.6	46.1	53.0	57.6	28.4	30.2	33.6
Current Federal Income Tax as % of Net Income plus current Federal Income Tax[c]	35.6	28.4	39.6	16.5	8.8	10.1	18.3
Plant							
Total Plant as % of Total Operating Revenue	171.0	72.9	85.4	157.0	172.9	182.1	207.9
Net Plant as % of Total Operating Revenue	98.5	38.4	39.2	64.8	71.5	75.4	87.7
Depreciation Reserve as % of Total Plant	42.4	47.3	54.1	58.7	58.7	58.7	57.8
Depreciation Reserve as % of Depreciable Plant	43.8	52.1	55.5	59.9	59.2	63.6	59.9
Total Plant per Employee ($000)	547.1	673.1	844.0	967.0	1,069.5	1,170.9	1,210.9
Capitalization							
Long-term Debt as % of Net Plant	71.8	64.1	64.3	73.3	70.6	68.3	51.7
% Total Capitalization Represented by:							
a. Long-term Debt	48.6	39.4	36.4	39.3	38.6	35.1	30.7
b. Preferred Stock	5.8	6.7	4.3	1.5	0.9	0.6	0.6
c. Common Equity	45.5	53.9	59.3	59.2	60.5	64.3	64.7
% Current Year Financing of Construction Expenditures Represented by:							
a. Internal Sources	55.4	65.1	75.9	57.9	62.1	64.0	64.2
b. Equity Issues	3.7	6.0	0.0	0.0	0.0	0.0	4.5
c. Debt Issues	40.9	28.9	24.1	42.1	37.9	36.0	31.3

a. Reflects pre-federal income tax coverage.
b. Not available.
c. Includes "Investment Tax Credit Adjustment."

CHART 14-1

GAS UTILITY INDUSTRY TOTAL CAPITALIZATION

(INVESTOR OWNED)



REFERENCE: TABLE 14-1

TABLE 14-4
SELECTED COMPOSITE ANALYTICAL RATIOS INVESTOR-OWNED GAS UTILITY INDUSTRY INTEGRATED COMPANIES, 1984-1990

	1984	1985	1986	1987	1988	1989[R]	1990
Earnings							
Utility Operating Income as % of Total Plant	8.3	7.5	7.5	6.7	6.7	6.4	4.7
Utility Operating Income as % of Net Plant	12.9	12.6	11.6	10.6	10.9	11.0	8.0
Operating Revenue as % of Total Plant	134.5	122.5	100.9	79.3	78.3	68.8	54.6
Common Dividend Payout Ratio	78.7	154.6	79.7	79.5	118.8	72.8	94.2
Return on Common Equity	13.1	5.6	11.9	11.5	8.7	12.0	8.6
Return on Average Common Equity	13.0	a	a	11.8	a	a	9.2
Return on Net Plant	8.8	4.4	7.3	6.6	4.4	6.3	4.6
Pretax Coverage of:							
Total Interest Expense[b]	3.7	2.3	3.0	2.7	2.3	2.3	2.0
Long-Term Debt Interest Expense[b]	4.4	3.5	4.4	4.1	3.7	4.1	3.1
Allowance for Funds Used During Construction as % of Net Income	0.7	1.5	1.0	1.5	2.1	1.4	4.9
Expenses							
Operating Expenses as % of Operating Revenue	93.9	94.0	92.7	91.7	91.4	90.7	91.6
Maintenance Expenses as % of Total Plant	2.3	2.2	2.2	1.9	1.9	1.8	1.6
Depreciation Expenses as % of Total Plant	3.6	4.0	3.1	3.2	3.3	3.5	3.3
Depreciation Expenses as % of Depreciable Plant	3.8	4.0	a	3.3	3.4	3.6	3.5
Total Taxes as % of Total Plant	9.9	8.4	8.4	6.4	6.2	5.4	4.4
Total Taxes as % of Net Plant	15.6	14.1	13.0	10.1	10.1	9.2	7.5
Total Taxes as % of Net Income plus Total Taxes	61.2	71.7	62.7	58.8	67.8	58.4	60.4
Current Federal Income Tax as % of Net Income plus current Federal Income Tax[c]	39.7	51.4	21.3	41.6	40.2	17.3	9.3
Plant							
Total Plant as % of Total Operating Revenue	74.4	81.6	99.1	126.1	127.8	145.3	183.2
Net Plant as % of Total Operating Revenue	47.5	48.6	64.2	79.7	79.0	84.4	108.8
Depreciation Reserve as % of Total Plant	36.1	40.4	35.2	36.8	38.2	41.9	40.6
Depreciation Reserve as % of Depreciable Plant	38.4	40.6	35.9	37.8	38.8	43.0	42.7
Total Plant per Employee ($000)	289.7	328.0	294.6	337.9	355.8	417.3	464.0
Capitalization							
Long-term Debt as % of Net Plant	52.6	37.1	52.9	48.3	49.9	49.7	50.8
% Total Capitalization Represented by:							
a. Long-term Debt	41.2	40.6	44.5	43.4	47.4	47.0	47.1
b. Preferred Stock	5.0	3.7	4.2	4.7	4.8	3.5	3.0
c. Common Equity	53.8	55.7	51.3	51.9	47.8	49.5	49.8
% Current Year Financing of Construction Expenditures Represented by:							
a. Internal Sources	78.5	89.7	66.3	67.0	74.9	57.5	56.3
b. Equity Issues	5.3	3.0	0.4	11.1	0.6	7.2	1.4
c. Debt Issues	16.2	7.3	33.3	21.9	24.5	35.3	42.3

a. Not available.
b. Reflects pre-federal income tax coverage.
c. Includes "Investment Tax Credit Adjustment."
R–Revised.

TABLE 14-5
SELECTED COMPOSITE ANALYTICAL RATIOS INVESTOR-OWNED GAS UTILITY INDUSTRY COMBINATION COMPANIES, 1984–1990

	1984	1985	1986	1987	1988	1989[R]	1990
Gas Operations							
Earnings							
Utility Operating Income as % of Total Plant	9.3	8.7	7.5	6.8	6.6	6.3	5.5
Utility Operating Income as % of Net Plant	14.3	11.5	10.0	9.3	9.2	9.0	8.1
Operating Revenue as % of Total Plant	129.5	121.5	96.0	84.2	81.8	78.3	70.6
Common Dividend Payout Ratio	52.7	71.6	70.9	89.7	117.7	96.8	154.2
Return on Common Equity	19.2	12.0	12.0	10.1	7.5	8.2	5.2
Return on Average Common Equity	19.8	13.2	c	10.1	c	8.6	a
Return on Net Plant	8.1	5.0	5.1	4.2	3.1	3.5	2.2
Pretax Coverage of:							
Total Interest Expense[a]	3.6	3.4	3.1	3.1	2.6	2.5	2.0
Long-Term Debt Interest Expense[a]	4.0	3.7	3.4	3.5	3.0	2.8	2.4
Allowance for Funds Used During Construction as % of Net Income	26.8	28.3	20.1	12.6	12.5	11.2	13.6
Expenses							
Operating Expenses as % of Operating Revenue	94.1	93.9	93.1	92.5	92.4	92.4	92.5
Maintenance Expenses as % of Total Plant	2.4	2.4	2.3	2.3	2.3	2.1	2.1
Depreciation Expenses as % of Total Plant	3.5	3.6	3.7	3.7	3.8	3.8	3.7
Depreciation Expenses as % of Depreciable Plant	3.7	3.7	3.9	3.8	4.1	3.9	3.8
Total Taxes as % of Total Plant	10.1	9.7	8.4	7.8	6.8	6.5	5.8
Total Taxes as % of Net Plant	15.5	12.8	11.2	10.6	9.6	9.4	8.5
Total Taxes as % of Net Income plus Total Taxes	62.2	67.9	65.3	68.5	72.5	67.9	75.4
Current Federal Income Tax as % of Net Income plus current Federal Income Tax[b]	40.1	38.5	28.6	37.8	37.2	31.2	48.5
Plant							
Total Plant as % of Total Operating Revenue	77.2	82.3	104.2	118.7	122.2	127.8	141.7
Net Plant as % of Total Operating Revenue	50.3	62.2	77.6	87.2	87.5	88.8	96.9
Depreciation Reserve as % of Total Plant	34.9	24.4	25.5	26.6	28.4	30.5	31.6
Depreciation Reserve as % of Depreciable Plant	36.5	25.4	26.9	27.7	30.0	31.6	32.8
Total Plant per Employee ($000)	258.3	299.2	318.8	342.1	383.0	406.7	437.0
All Operations							
Earnings							
Utility Operating Income as % of Total Plant	8.0	7.6	7.3	6.5	6.8	6.8	6.5
Utility Operating Income as % of Net Plant	10.5	10.0	9.8	8.8	9.4	9.8	9.4
Operating Revenue as % of Total Plant	42.1	52.3	36.9	34.2	34.6	36.3	35.9
Common Dividend Payout Ratio	63.7	74.1	69.6	110.4	117.6	86.2	87.9
Return on Common Equity	13.8	11.8	12.6	8.3	7.7	9.8	9.3
Return on Average Common Equity	13.9	12.3	c	8.3	7.8	9.8	9.4
Return on Net Plant	5.7	4.9	5.3	3.4	3.1	4.2	3.9
Pretax Coverage of:							
Total Interest Expense[a]	3.2	3.0	3.2	2.9	2.2	2.5	2.5
Long-Term Debt Interest Expense[a]	3.5	3.3	3.5	3.2	2.4	2.8	2.6
Allowance for Funds Used During Construction as % of Net Income	34.8	37.2	26.6	22.7	18.9	13.6	10.3
Expenses							
Operating Expenses as % of Operating Revenue	85.2	84.9	83.5	83.0	81.8	82.5	82.9
Maintenance Expenses as % of Total Plant	2.2	2.2	2.2	2.2	2.3	2.3	2.3
Depreciation Expenses as % of Total Plant	2.6	2.6	2.7	2.8	3.1	3.6	3.0
Depreciation Expenses as % of Depreciable Plant	3.5	3.5	3.4	3.2	3.3	4.0	3.2
Total Taxes as % of Total Plant	6.2	5.9	6.1	5.4	4.7	4.6	5.0
Total Taxes as % of Net Plant	8.1	7.8	8.1	7.3	6.5	6.6	7.3
Total Taxes as % of Net Income plus Total Taxes	55.2	57.7	57.1	64.5	63.8	54.5	61.9
Current Federal Income Tax as % of Net Income plus current Federal Income Tax[b]	27.4	28.5	25.7	33.4	30.6	24.3	30.0
Plant							
Total Plant as % of Total Operating Revenue	237.4	252.4	270.8	292.7	289.2	275.5	278.5
Net Plant as % of Total Operating Revenue	180.6	191.2	202.3	215.7	207.8	192.0	191.0
Depreciation Reserve as % of Total Plant	23.9	24.2	25.3	26.3	28.1	30.3	31.4
Depreciation Reserve as % of Depreciable Plant	32.3	32.0	32.1	30.4	30.0	33.2	33.5
Capitalization							
Long-term Debt as % of Net Plant	45.8	44.8	44.6	44.8	46.1	48.7	48.1
% Total Capitalization Represented by:							
a. Long-term Debt	46.8	46.7	46.7	47.9	49.0	49.4	49.4
b. Preferred Stock	11.2	10.2	9.1	8.4	8.1	7.5	7.2
c. Common Equity	42.0	43.1	44.2	43.7	42.9	43.1	43.3
% Current Year Financing of Construction Expenditures Represented by:							
a. Internal Sources	45.4	52.3	60.7	72.4	76.1	59.7	59.3
b. Equity Issues	20.2	28.6	6.5	6.4	8.2	4.6	9.4
c. Debt Issues	34.4	19.1	32.8	21.2	15.7	35.7	31.4

a. Reflects pre-federal income tax coverage.
b. Includes "Investment Tax Credit Adjustment."
c. Not available.
R–Revised.

TABLE 14-6

SELECTED ANALYTICAL RATIOS RELATING TO INVESTOR-OWNED GAS UTILITY INDUSTRY OPERATING AND MAINTENANCE EXPENSES, 1980–1990[a]

	Total Operating and Maintenance Expense per Therm of Sales (cents)					Total Operating Revenue per Therm of Sales (cents)				
Type of Activity	1980	1985	1988	1989	1990	1980	1985	1988	1989[R]	1990
Natural Gas Distribution[b]	29.37	46.65	39.47	40.76	42.22	34.82	56.68	50.36	52.13	54.10
Natural Gas Transmission	22.12	35.62	31.81	34.82	36.33	25.23	40.57	36.90	42.61	46.33

	Transmission and Distribution Expense per Mile of Pipe (dollars)					Total Cost of Purchases as Percent of Total Operating and Maintenance Expense (%)				
Type of Activity	1980	1985	1988	1989	1990	1980	1985	1988	1989	1990
Natural Gas Distribution[b]	2,666.68	3,396.86	3,744.18	4,018.38	4,066.01	85.80	84.21	76.64	75.97	74.11
Natural Gas Transmission	11,510.06	13,899.46	11,321.37	11,315.47	11,483.00	90.66	87.12	76.82	73.15	69.94

	Customer Accounts Expense Per Customer (dollars)					Total Payroll as Percent of Total Operating and Maintenance Expense (%)				
Type of Activity	1980	1985	1988	1989	1990	1980	1985	1988	1989	1990
Natural Gas Distribution[b]	22.68	33.33	33.69	33.25	33.68	9.05	8.92	13.02	13.11	14.10
Natural Gas Transmission						2.97	4.10	6.87	7.32	8.32

	Gross Sales Expense per Customer (dollars)				
Type of Activity	1980	1985	1988	1989	1990
Straight Natural Gas Distribution	2.94	4.95	6.25	5.36	5.19
Combination Natural Gas Distribution	0.60	1.07	2.11	2.25	2.37

a. Integrated companies excluded.
b. Includes both straight gas and combination companies.
R–Revised.

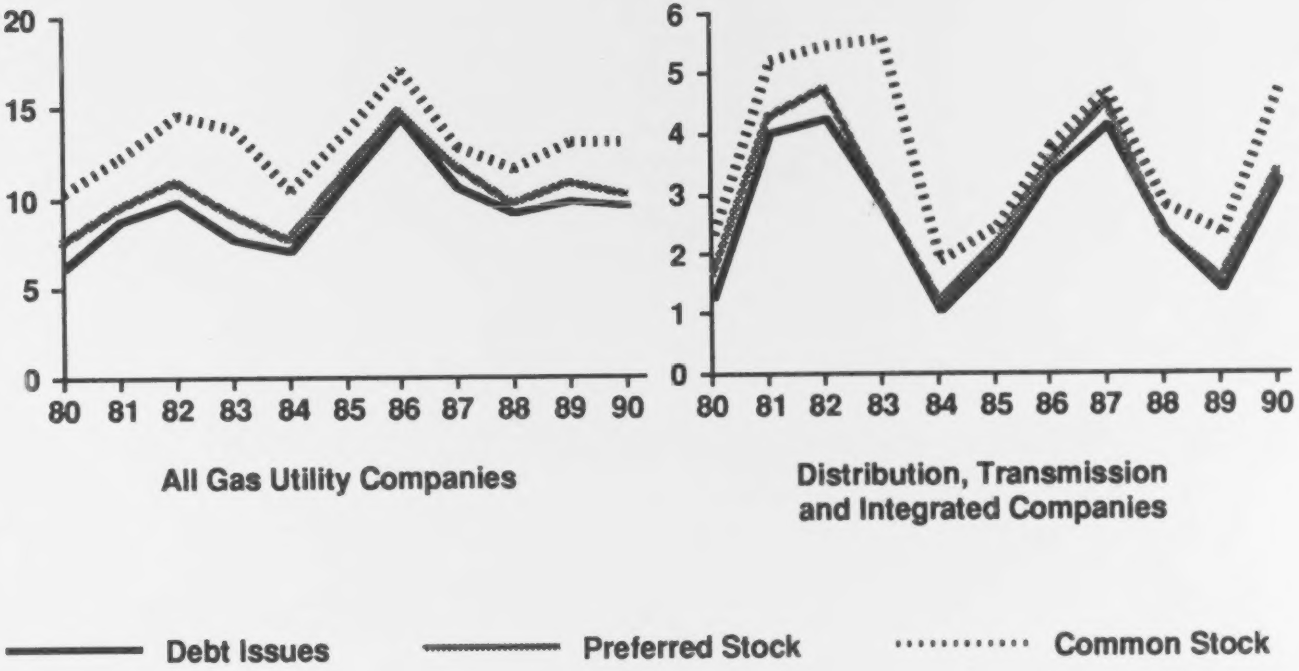
SECTION 15
SECURITY ISSUES

	1990	% Change 90/89
No. of Issues		
Total	337	+ 3.4
Common Stock	179	+ 9.8
Preferred	10	− 9.1
Debt Issues	148	− 2.6
Amount		
(Thousands)		
Total	$13,219,468	+ 0.1
Common Stock	2,975,234	+23.9
Preferred Stock	525,000	−38.7
Debt Issues	9,719,234	− 2.3

CHART 15-1

GAS UTILITY NEW SECURITY ISSUES

(BILLIONS OF DOLLARS)



All Gas Utility Companies

Distribution, Transmission and Integrated Companies

REFERENCE: TABLES 15-1, 15-4, 15-6, 15-8, 15-10 and 15-12

TABLE 15-2
GAS UTILITY INDUSTRY AVERAGE PERCENT COST AND YIELD OF SECURITY ISSUES OF DISTRIBUTION, INTEGRATED, TRANSMISSION, HOLDING,[a] AND COMBINATION GAS AND ELECTRIC COMPANIES
1970-1990[b]

	Preferred Stock				Bonds				Debentures				Sample Amount (000)		
	Cost %		Yield %		Cost %		Yield %		Cost %		Yield %				
Year	Average	Weighted Average	Average	Weighted Average	Average	Weighted Average	Average	Weighted Average	Average	Weighted Average	Average	Weighted Average	Preferred Stock	Bonds	Debentures
1970	9.25	9.27	9.16	9.18	9.04	9.08	9.06	9.26	9.16	9.36	9.06	9.26	$ 570,674	$ 3,492,500	$ 897,000
1971	8.16	7.98	8.05	7.87	8.06	7.90	7.97	7.81	8.16	8.14	8.07	8.05	922,312	3,098,589	912,500
1972	7.70	7.65	7.62	7.56	7.60	7.56	7.53	7.50	7.53	7.44	7.46	7.38	1,074,539	2,631,306	455,500
1973	7.72	7.61	7.66	7.54	7.98	7.93	7.91	7.87	7.80	7.77	7.73	7.71	1,051,459	2,137,890	200,000
1974	9.96	9.83	9.82	9.68	9.76	9.84	9.67	9.75	9.48	9.34	9.40	9.25	996,175	3,222,000	535,000
1975	10.87	10.89	10.55	10.53	10.10	10.06	10.00	9.97	10.28	10.31	10.17	10.20	1,028,515	3,346,050	801,000
1976	10.15	9.49	9.16	9.24	8.96	9.01	8.87	8.93	8.88	8.87	8.81	8.80	1,050,268	2,826,590	735,000
1977	8.50	8.45	8.34	8.31	8.51	8.50	8.45	8.44	8.74	8.36	8.63	8.29	973,512	2,682,500	265,000
1978	8.84	8.90	8.75	8.68	8.40	8.18	8.38	8.01	9.26	9.02	9.12	8.89	806,206	2,669,900	150,000
1979	9.05	9.32	9.03	9.23	11.14	10.55	11.12	10.48	10.81	11.12	10.65	11.04	705,500	2,348,300	645,000
1980	11.91	12.40	11.67	12.20	11.99	12.92	11.90	12.82	13.07	12.67	12.97	12.57	935,500	3,038,400	925,000
1981	13.75	14.06	13.57	13.80	15.06	16.55	14.77	16.29	16.24	16.11	15.80	15.76	630,500	3,956,154	1,207,500
1982	14.39	14.61	14.20	14.32	14.39	14.94	14.27	14.82	15.46	15.19	15.17	14.95	858,800	3,914,100	1,356,000
1983	11.69	12.18	11.42	11.85	11.82	12.10	11.63	11.96	12.40	13.54	12.23	13.39	1,209,175	3,958,380	780,000
1984	13.34	13.22	13.11	12.97	12.61	12.99	12.43	12.84	11.82	11.83	11.72	11.72	538,000	3,662,570	786,250
1985	11.68	11.67	11.65	11.67	10.80	11.13	10.47	10.93	11.24	11.58	11.11	11.46	101,000	4,477,947	722,189
1986	9.06	9.50	8.98	9.43	9.30	9.53	9.13	9.43	9.65	10.20	9.47	10.00	523,000	7,679,027	2,566,000
1987	7.50	7.38	7.37	7.34	9.25	9.56	9.18	9.49	9.29	9.26	9.09	9.15	544,174	3,614,455	1,503,500
1988	8.84	8.75	8.76	8.67	9.83	9.75	9.72	9.67	10.15	10.09	9.96	9.95	344,500	3,334,286	1,282,000
1989	8.48	9.59	8.36	9.35	9.11	9.49	9.01	9.39	10.14	10.75	9.93	10.56	630,000	2,536,300	2,658,000
1990	8.78	8.70	8.69	8.62	9.35	9.69	9.27	9.61	9.33	9.09	9.23	8.99	525,000	2,837,250	1,330,000

a. Refer to Table 15-1 for name of holding companies.

b. Includes only those preferred stocks, bonds, and debentures shown in Table 15-1 for which necessary cost and yield data were available.

Definitions: "Cost" refers to the expenses incurred by a company relative to new security issues over the life of debt issues and fixed dividends (if applicable) on preferred stocks. It includes underwriter fees, plus discount expenses less premiums.

"Yield" is the rate of return on investment by a buyer of these debt issues and fixed dividends (if applicable) expected on preferred stock. It includes underwriter fees, plus premium expenses less discounts.

TABLE 15-3
GAS UTILITY INDUSTRY LONG TERM DEBT ISSUES, BY MOODY'S BOND RATING CATEGORY, 1990

	Issues		Cost %		Yield %	
Rating	Number	Sample Amount (000)	Average	Weighted Average	Average	Weighted Average
Aaa	1	$ 50,000	9.07	9.07	9.09	9.09
Aa	5	$270,000	9.04	9.18	8.98	9.10
A	7	$615,000	9.32	9.55	9.27	9.51
Baa	17	$1,384,200	9.50	9.86	9.42	9.78
Ba	•	•	•	•	•	•
B	•	•	•	•	•	•

•No issues used in this sample.

TABLE 15-1
GAS UTILITY INDUSTRY SECURITY ISSUES OF DISTRIBUTION, INTEGRATED, TRANSMISSION, HOLDING,[a] AND COMBINATION GAS AND ELECTRIC COMPANIES
1970-1990[b]

	Total		Common Stock		Preferred Stock		Debt Issues							
							Total		Bonds		Debentures		Notes	
Year	No. of Issues	Amount (000)	No. of Issues	Amount (000)	No. of Issues	Amount (000)	No. of Issues	Amount (000)	No. of Issues	Amount (000)	No. of Issues	Amount (000)	No. of Issues	Amount (000)
1970	280	$ 6,030,084	68	$ 745,638	33	$ 620,674	179	$ 4,663,772	125	$ 3,502,000	27	$ 897,500	27	$ 264,272
1971	330	7,012,900	96	1,283,271	47	965,439	187	4,764,190	103	3,193,366	26	927,500	58	643,324
1972	280	6,832,495	83	1,306,307	39	1,185,808	158	4,340,380	87	3,032,306	13	554,500	58	753,574
1973	286	6,302,378	96	1,408,410	39	1,073,959	151	3,820,009	82	2,466,690	6	260,000	63	1,093,319
1974	286	7,889,359	102	1,144,544	39	1,128,175	145	5,616,640	78	3,950,281	17	739,519	50	926,840
1975	353	8,312,575	141	1,973,385	42	1,059,396	170	5,279,794	101	3,661,125	19	911,571	50	707,098
1976	336	9,104,026	152	2,472,747	41	1,108,268	143	5,523,011	75	2,899,279	16	860,500	52	1,763,232
1977	336	8,244,438	167	1,864,904	40	1,106,130	129	5,273,404	70	2,956,200	10	461,500	49	1,855,704
1978	351	7,933,090	163	2,167,077	48	1,055,458	140	4,710,555	73	3,189,650	12	306,516	55	1,214,389
1979	322	7,959,649	162	1,860,954	30	773,692	130	5,325,003	69	2,908,350	11	895,000	50	1,521,653
1980	275	10,508,334	101	2,879,775	31	1,288,237	143	6,340,322	73	3,571,945	18	1,510,000	52	1,258,377
1981	472	12,384,931	246	2,816,829	27	654,940	199	8,913,162	110	5,051,554	16	1,207,500	73	2,654,108
1982	523	14,794,327	287	3,832,926	32	1,073,300	204	9,888,101	107	4,538,410	20	1,356,000	77	3,993,691
1983	499	14,014,964	275	4,855,205	29	1,301,151	145	7,858,608	86	4,651,154	12	1,024,703	47	2,182,751
1984	386	10,596,488	229	2,852,559	13	538,000	144	7,205,929	90	4,452,571	12	838,250		1,915,108
1985	415	13,893,132	222	2,428,977	12	325,701	181	11,138,454	85	6,131,774	9	770,015	87	4,236,665
1986	415	17,218,513	186	1,906,278	15	596,318	214	14,715,917	126	9,628,924	28	2,586,000	60	2,500,993
1987	359	12,994,680	182	1,324,596	20	1,001,299	157	10,668,785	66	4,403,166	21	2,664,530	70	3,601,089
1988	331	11,773,337	161	2,036,077	13	443,290	157	9,293,970	72	4,906,629	14	1,298,146	71	3,089,195
1989	326	13,201,344	163	2,400,699	11	857,000	152	9,943,645	48	3,023,579	15	2,658,000	89	4,262,066
1990	337	13,219,468	179	2,975,234	10	525,000	148	9,719,234	59	3,457,750	14	1,377,000	75	4,884,484

a. Holding companies used in this section are as follows: Columbia Gas Systems, Inc., Commonwealth Energy System, Connecticut Energy Corp., Consolidated Natural Gas, Energen, New Jersey Resources Corp., NIPSCO Industries, Inc., Northern States Power Company, Pacific Enterprises, Public Service Company of Colorado, Sonat, Inc., Tenneco, Inc., Texas Utilities Company, Utilicorp United, Inc., and Yankee Energy Systems.

b. All new and refunding security issues, except sales by subsidiaries to parent companies and direct exchanges for which data were obtainable have been included. Short term notes for less than one year are omitted. Bonds, debentures, and notes are included in principal amounts; preferred stocks at stated or liquidating values; and common stocks at offerings prices.

TABLE 15–4
GAS UTILITY INDUSTRY COMMON STOCK ISSUES, BY TYPE OF COMPANY
1984–1990[a]

Type of Company	1984	1985	1986	1987	1988	1989	1990
Total							
Amount (000)	$2,852,559	$2,428,977	$1,906,278	$1,324,596	$2,036,077	$2,400,699	$2,975,234
No. of Issues	229	222	186	182	161	163	178
Distribution							
Amount (000)	$224,065	$304,841	$300,911	$109,011	$247,391	$334,951	$327,137
No. of Issues	34	62	65	67	58	59	74
Transmission							
Amount (000)	$35,625	$300	$1,000	$6,973	$32,014	$187,500	$215,200
No. of Issues	1	1	1	4	2	1	1
Integrated							
Amount (000)	$334,095	$35,023	$26,593	$76,820	$96,674	$140,323	$588,471
No. of Issues	39	16	10	16	18	24	15
Combination Utilities							
Amount (000)	$1,742,913	$1,767,779	$1,469,309	$951,863	$1,094,330	$1,217,059	$631,010
No. of Issues	136	121	99	83	66	63	69
Holding[b]							
Amount (000)	$515,861	$321,034	$108,465	$179,929	$565,668	$520,866	$1,213,416
No. of Issues	19	22	11	12	17	16	19

[a] See Footnote "b", Table 15–1 for description of securities included and the derivation of stated amounts.

[b] A holding company is a corporation that is formed for the sole purpose of owning stock in other companies. Names of companies included in Footnote "a" of Table 15–1.

TABLE 15-5
GAS UTILITY INDUSTRY INDEXES OF COMMON STOCK PRICES, DIVIDENDS, YIELDS, AND EARNINGS BY TYPE OF COMPANY, 1985–1990

Year	1985		1986		1987		1988		1989		1990	
Type of Company / Week	Jun 28	Dec 31	Jul 1	Dec 30	Jun 30	Dec 29	Jul 1	Dec 30	Jun 30	Dec 29	Jun 29	Dec 26
Natural Gas Industry												
a) Market Price ($ Per Share)	135.91	138.65	130.83	122.52	165.38	127.07	144.37	143.08	169.64	198.24	177.68	169.92
b) Dividend ($ Per Share)	7.89	8.12	8.02	7.69	7.61	7.51	7.12	7.40	7.31	7.37	7.41	7.00
c) Yield (Percent)	5.81	5.86	6.13	6.27	4.60	5.91	4.93	5.17	4.31	3.72	4.17	4.17
d) Earnings ($ Per Share)[a]	9.48	8.48	9.48	8.47	3.26	6.68	8.26	6.25	6.37	10.89	b	b
Distribution Companies												
a) Market Price ($ Per Share)	81.61	76.58	95.58	88.66	88.48	75.96	89.63	86.76	99.91	117.05	107.14	109.09
b) Dividend ($ Per Share)	6.03	6.22	5.51	5.71	5.84	6.02	6.13	6.30	6.43	6.54	6.68	6.84
c) Yield (Percent)	7.39	8.12	5.76	6.44	6.60	7.93	6.84	7.22	6.44	5.59	6.24	6.27
d) Earnings ($ Per Share)[a]	2.43	2.42	2.43	7.42	8.37	8.00	9.22	9.37	9.14	9.50	b	b
Transmission Companies												
a) Market Price ($ Per Share)	167.48	175.87	176.25	154.25	194.30	141.81	173.26	178.01	210.36	246.50	227.47	199.51
b) Dividend ($ Per Share)	9.66	9.91	9.93	9.22	9.23	8.86	8.86	8.86	8.86	8.86	8.66	7.35
c) Yield (Percent)	5.77	5.63	5.63	5.97	4.75	6.25	5.11	4.98	4.21	3.59	3.81	3.68
d) Earnings ($ Per Share)[a]	13.70	9.97	13.70	9.97	3.16	4.25	6.99	3.06	3.92	14.74	b	b

a. Earnings are for twelve month periods.
b. 1990 data not available.
Source: Moody's Investor Service, *Moody's Public Utility News Reports.*

TABLE 15–6
GAS UTILITY INDUSTRY PREFERRED STOCK ISSUES, BY TYPE OF COMPANY
1984–1990[a]

Type of Company	1984	1985	1986	1987	1988	1989	1990
Total							
Amount (000)	$538,000	$325,701	$596,318	$1,001,299	$443,290	$857,000	$525,000
No. of Issues	13	12	15	20	13	11	10
Distribution							
Amount (000)	$10,000	$361	$22,118	$76,000	$20,290	$15,000	$0
No. of Issues	1	3	3	5	2	1	0
Transmission							
Amount (000)	$0	$20,000	$90,000	$59,174	$0	$0	$0
No. of Issues	0	1	1	1	0	0	0
Integrated							
Amount (000)	$100,000	$0	$0	$130,000	$0	$50,000	$75,000
No. of Issues	1	0	0	1	0	1	1
Combination Utilities							
Amount (000)	$428,000	$177,200	$454,200	$305,000	$219,500	$465,000	$215,000
No. of Issues	11	6	10	8	8	4	4
Holding[b]							
Amount (000)	$0	$128,140	$30,000	$431,125	$203,500	$327,000	$235,000
No. of Issues	0	2	1	5	3	5	5

a. See Footnote "b", Table 15–1 for description of securities included and the derivation of stated amounts.

b. A holding company is a corporation that is formed for the sole purpose of owning stock in other companies. Names of companies included in Footnote "a" of Table 15–1.

TABLE 15-7
GAS UTILITY INDUSTRY AVERAGE PERCENT COST AND YIELD OF PREFERRED STOCK ISSUES
1984-1990[a]

	1984		1985		1986		1987		1988		1989		1990	
	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %
Total														
Average	13.34	13.11	11.68	11.65	9.06	8.98	7.50	7.37	8.84	8.76	8.48	8.36	8.78	8.69
Weighted Average	13.22	12.97	11.67	11.67	9.50	9.43	7.38	7.34	8.75	8.67	9.59	9.35	8.70	8.62
Sample Amount (000)		$538,000		$101,000		$523,000		$544,174		$344,500		$630,000		$525,000
Distribution														
Average	12.88	12.88	c	c	c	c	9.28	9.17	8.77	8.77	c	c	c	c
Weighted Average	12.86	12.88	c	c	c	c	9.49	9.38	8.77	8.77	c	c	c	c
Sample Amount (000)		$10,000		$0		$0		$50,000		$20,000		$0		$0
Transmission														
Average	c	c	8.80	8.80	8.75	8.75	6.11	6.11	c	c	c	c	c	c
Weighted Average	c	c	8.80	8.80	8.75	8.75	6.11	6.11	c	c	c	c	c	c
Sample Amount (000)		$0		$20,000		$90,000		$59,174		$0		$0		$0
Integrated														
Average	10.88	10.62	c	c	c	c	c	c	c	c	6.95	6.85	6.49	6.40
Weighted Average	10.88	10.62	c	c	c	c	c	c	c	c	6.95	6.85	6.49	6.40
Sample Amount (000)		$100,000		$0		$0		$0		$0		$50,000		$75,000
Combination Utilities														
Average	13.60	13.35	12.63	12.60	9.10	9.01	6.79	6.75	9.22	9.16	8.51	8.37	8.68	8.60
Weighted Average	13.78	13.52	12.38	12.37	9.66	9.57	7.20	7.17	9.09	8.99	9.97	9.68	8.71	8.64
Sample Amount (000)		$428,000		$81,000		$433,000		$250,000		$174,500		$465,000		$215,000
Holding[b]														
Average	c	c	c	c	c	c	7.59	7.23	7.72	7.67	9.16	9.11	9.32	9.23
Weighted Average	c	c	c	c	c	c	7.45	7.40	8.34	8.33	9.19	9.10	9.40	9.31
Sample Amount (000)		$0		$0		$0		$185,000		$150,000		$115,000		$235,000

a. Includes only those issues in Table 15-6 for which necessary cost and yield data were available.
b. A holding company is a corporation that is formed for the sole purpose of owning stock in other companies. Names of companies included in Footnote "a" of Table 15-1.
c. No issues used in this sample.

Definitions: "Cost" refers to the expenses incurred by a company. It includes dividends, underwriter fees, plus discount expenses less premiums.
"Yield" is the rate of return on investment by a buyer.

TABLE 15–8
GAS UTILITY INDUSTRY BOND ISSUES, BY TYPE OF COMPANY
1984–1990[a]

Type of Company	1984	1985	1986	1987	1988	1989	1990
Total							
Amount (000)	$4,452,571	$6,131,774	$9,628,924	$4,403,166	$4,906,629	$3,023,579	$3,457,750
No. of Issues	90	85	126	66	72	48	59
Distribution							
Amount (000)	$117,355	$676,729	$798,539	$323,693	$668,168	$200,000	$498,700
No. of Issues	7	20	33	12	23	10	15
Transmission							
Amount (000)	$0	$0	$0	$220,400	$0	$175,000	$0
No. of Issues	0	0	0	2	0	1	0
Integrated							
Amount (000)	$227,150	$18,000	$313,000	$60,000	$18,000	$0	$295,000
No. of Issues	6	1	4	1	1	0	3
Combination Utilities							
Amount (000)	$3,922,866	$4,682,495	$6,813,105	$3,375,073	$3,111,961	$1,778,779	$2,039,050
No. of Issues	73	54	72	44	33	26	30
Holding[b]							
Amount (000)	$185,200	$754,550	$1,704,280	$424,000	$1,108,500	$869,800	$625,000
No. of Issues	4	10	17	7	15	11	11

a. See Footnote "b", Table 15–1 for description of securities included and the derivation of stated amounts.

b. A holding company is a corporation that is formed for the sole purpose of owning stock in other companies. Names of companies included in Footnote "a" of Table 15–1.

TABLE 15-10
GAS UTILITY INDUSTRY DEBENTURE ISSUES, BY TYPE OF COMPANY
1984–1990[a]

Type of Company	1984	1985	1986	1987	1988	1989	1990
Total							
Amount (000)	$838,250	$770,015	$2,586,000	$2,664,530	$1,298,146	$2,658,000	$1,377,000
No. of Issues	12	9	28	21	14	15	14
Distribution							
Amount (000)	$0	$0	$316,000	$229,500	$138,146	$5,000	$50,000
No. of Issues	0	0	10	6	4	1	1
Transmission							
Amount (000)	$437,000	$355,750	$650,000	$1,921,030	$450,000	$300,000	$305,000
No. of Issues	6	3	6	9	3	1	2
Integrated							
Amount (000)	$120,000	$224,039	$270,000	$214,000	$360,000	$468,000	$138,000
No. of Issues	3	2	3	4	5	4	4
Combination Utilities							
Amount (000)	$181,250	$190,226	$900,000	$0	$0	$1,475,000	$480,000
No. of Issues	2	4	5	0	0	4	4
Holding[b]							
Amount (000)	$100,000	$0	$450,000	$300,000	$350,000	$410,000	$404,000
No. of Issues	1	0	4	2	2	5	3

a. See Footnote "b", Table 15-1 for description of securities included and the derivation of stated amounts.

b. A holding company is a corporation that is formed for the sole purpose of owning stock in other companies. Names of companies included in Footnote "a" of Table 15-1.

TABLE 15-9

GAS UTILITY INDUSTRY AVERAGE PERCENT COST AND YIELD OF BOND ISSUES

1984-1990[a]

	1984		1985		1986		1987		1988		1989		1990	
	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %
Total														
Average	12.61	12.43	10.80	10.47	9.30	9.13	9.25	9.18	9.83	9.72	9.11	9.01	9.35	9.27
Weighted Average	12.95	12.84	11.13	10.93	9.53	9.43	9.56	9.49	9.75	9.67	9.49	9.39	9.69	9.61
Sample Amount (000)		$3,662,570		$4,477,947		$7,679,027		$3,614,455		$3,334,286		$2,536,300		$2,837,250
Distribution														
Average	13.41	13.38	10.11	9.11	9.25	9.15	9.63	9.60	9.89	9.73	9.55	9.46	9.17	9.12
Weighted Average	12.81	12.72	9.11	8.80	9.18	9.09	9.28	9.22	9.65	9.55	9.62	9.57	8.93	8.86
Sample Amount (000)		$59,750		$400,200		$571,000		$193,000		$548,025		$185,000		$332,200
Transmission														
Average	c	c	c	c	c	c	c	c	c	c	c	c	c	c
Weighted Average	c	c	c	c	c	c	c	c	c	c	c	c	c	c
Sample Amount (000)		$0		$0		$0		$0		$0		$0		$0
Integrated														
Average	14.47	14.29	c	c	8.97	9.08	9.22	9.14	c	c	c	c	9.99	9.92
Weighted Average	14.34	14.22	c	c	8.97	9.08	9.22	9.14	c	c	c	c	10.00	9.93
Sample Amount (000)		$110,000		$0		$300,000		$60,000		$0		$0		$275,000
Combination Utilities														
Average	12.46	12.27	10.92	10.53	9.39	9.20	9.20	9.13	10.16	10.04	9.04	8.94	9.37	9.27
Weighted Average	12.92	12.78	11.30	11.10	9.66	9.55	9.59	9.52	9.53	9.45	9.53	9.43	9.71	9.64
Sample Amount (000)		$3,367,820		$3,802,747		$6,283,027		$3,027,455		$1,716,261		$1,630,300		$1,704,050
Holding[b]														
Average	13.88	13.82	11.82	11.75	8.74	8.57	9.18	9.07	10.03	9.97	8.85	8.72	9.41	9.30
Weighted Average	13.61	13.55	11.74	11.66	8.67	8.55	9.59	9.48	10.15	10.08	9.37	9.26	9.94	9.85
Sample Amount (000)		$125,000		$275,000		$525,000		$334,000		$1,070,000		$721,000		$526,000

[a] Includes only those issues in Table 15-8 for which necessary cost and yield data were available.

[b] A holding company is a corporation that is formed for the sole purpose of owning stock in other companies. Names of companies included in Footnote "a" of Table 15-1.

[c] No issues used in this sample.

Definitions: "Cost" refers to the expenses incurred by a company. It includes dividends, underwriter fees, plus discount expenses less premiums.
"Yield" is the rate of return on investment by a buyer.

TABLE 15-11
GAS UTILITY INDUSTRY AVERAGE PERCENT COST AND YIELD OF DEBENTURE ISSUES
1984-1990[a]

	1984		1985		1986		1987		1988		1989		1990	
	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %	Cost %	Yield %
Total														
Average	11.82	11.72	11.24	11.11	9.65	9.47	9.29	9.09	10.15	9.96	10.14	9.93	9.33	9.23
Weighted Average	11.83	11.72	11.58	11.46	10.20	10.00	9.26	9.15	10.09	9.95	10.75	10.56	9.09	8.99
Sample Amount (000)		$786,250		$722,189		$2,566,000		$1,503,500		$1,282,000		$2,658,000		$1,330,000
Distribution														
Average	c	c	c	c	9.07	8.85	9.83	9.47	10.40	9.92	8.75	8.25	10.03	9.93
Weighted Average	c	c	c	c	9.06	8.78	9.84	9.63	10.34	9.92	8.75	8.25	10.03	9.93
Sample Amount (000)		$0		$0		$316,000		$219,500		$122,000		$5,000		$50,000
Transmission														
Average	13.16	13.06	12.56	12.42	9.79	9.70	9.33	9.24	10.02	9.92	12.05	11.63	10.10	9.97
Weighted Average	12.84	12.72	12.49	12.35	9.81	9.72	9.36	9.27	10.01	9.91	12.05	11.63	10.11	9.99
Sample Amount (000)		$385,000		$355,750		$650,000		$770,000		$450,000		$300,000		$305,000
Integrated														
Average	11.80	11.72	11.66	11.64	9.46	9.39	8.27	8.04	10.05	9.98	9.84	9.80	10.14	10.05
Weighted Average	12.30	12.26	11.75	11.73	9.37	9.29	7.11	6.98	9.99	9.90	9.84	9.81	10.03	9.93
Sample Amount (000)		$120,000		$224,039		$250,000		$214,000		$360,000		$468,000		$95,000
Combination Utilities														
Average	9.97	9.75	8.84	8.63	11.23	10.92	c	c	c	c	11.23	11.02	8.96	8.85
Weighted Average	10.26	10.03	9.02	8.81	11.69	11.36	c	c	c	c	11.21	11.00	9.13	9.01
Sample Amount (000)		$181,250		$142,400		$900,000		$0		$0		$1,475,000		$480,000
Holding[b]														
Average	10.26	10.25	c	c	9.00	8.90	9.91	9.81	10.25	10.05	9.41	9.17	8.13	8.06
Weighted Average	10.26	10.25	c	c	9.03	8.93	10.12	10.04	10.20	10.08	9.17	9.05	7.93	7.85
Sample Amount (000)		$100,000		$0		$450,000		$300,000		$350,000		$410,000		$400,000

a. Includes only those issues in Table 15-10 for which necessary cost and yield data were available.
b. A holding company is a corporation that is formed for the sole purpose of owning stock in other companies. Names of companies included in Footnote "a" of Table 15-1
c. No issues used in this sample.

Definitions: "Cost" refers to the expenses incurred by a company. It includes dividends, underwriter fees, plus discount expenses less premiums.
"Yield" is the rate of return on investment by a buyer.

TABLE 15-12
GAS UTILITY INDUSTRY NOTE ISSUES, BY TYPE OF COMPANY
1984–1990[a]

Type of Company	1984	1985	1986	1987	1988	1989	1990
Total							
Amount (000)	$1,915,108	$4,236,665	$2,500,993	$3,601,089	$3,089,195	$4,262,066	$4,884,484
No. of Issues	42	87	60	70	71	89	75
Distribution							
Amount (000)	$185,600	$46,860	$81,873	$276,561	$130,108	$350,505	$416,142
No. of Issues	4	6	6	16	8	14	19
Transmission							
Amount (000)	$296,500	$753,500	$930,195	$993,274	$1,079,977	$559,524	$1,208,929
No. of Issues	5	17	11	15	10	6	10
Integrated							
Amount (000)	$369,626	$710,950	$484,899	$290,862	$176,043	$177,533	$838,000
No. of Issues	7	9	8	12	4	9	12
Combination Utilities							
Amount (000)	$640,182	$1,807,740	$705,420	$1,761,793	$903,972	$2,420,504	$1,391,913
No. of Issues	20	39	15	20	39	32	22
Holding[b]							
Amount (000)	$423,200	$917,615	$298,606	$278,599	$799,095	$754,000	$1,029,500
No. of Issues	6	16	20	7	10	28	12

a. See Footnote "b", Table 15–1 for description of securities included and the derivation of stated amounts.

b. A holding company is a corporation that is formed for the sole purpose of owning stock in other companies. Names of companies included in Footnote "a" of Table 15–1.

SECTION 16
CONSTRUCTION EXPENDITURES

	1990	% Change 90/89
Construction Expenditures		
(Millions)		
Total	$7,899	+ 7.6
Production & Storage	309	+12.0
Transmission	2,886	+38.7
Underground Storage	219	+37.7
Distribution	3,714	− 6.7
General	770	− 8.9

CONSTRUCTION EXPENDITURES

TABLE 16-1
GAS UTILITY INDUSTRY CONSTRUCTION EXPENDITURES, BY TYPE OF FACILITY, 1967–1994[a]

(Millions)

Year	Total	Production and Storage	Transmission	Underground Storage	Distribution	General
1967	2,252	186	1,006	91	848	121
1968	2,972	259	1,577	88	913	135
1969	2,686	83	1,511	128	863	101
1970	2,507	203	1,019	167	913	205
1971	2,419	340	842	171	888	178
1972	2,822	717	678	177	1,081	169
1973	2,966	771	746	201	1,094	155
1974	2,965	830	632	230	1,097	176
1975	2,466	555	590	276	910	136
1976	2,425	466	531	362	926	140
1977	2,833	620	670	323	1,048	172
1978	3,581	881	935	321	1,228	215
1979	4,366	1,125	1,226	281	1,448	286
1980	5,350	1,150	1,583	396	1,869	352
1981	6,389	1,346	2,352	326	1,955	410
1982	5,939	1,322	1,921	368	1,881	447
1983	4,078	607	1,065	139	1,845	422
1984	4,645	422	1,301	121	2,266	535
1985	5,671	790	1,562	175	2,577	567
1986	5,342	258	1,448	125	2,920	591
1987	5,328	251	1,295	107	3,055	620
1988	6,166	268	1,568	101	3,389	840
1989	7,341	276	2,081	159	3,980	845
1990	7,899	309	2,886	219	3,714	770
1991(forecast)	10,464	425	4,978	264	3,901	895
1992(forecast)	10,866	417	5,202	312	4,084	851
1993(forecast)	10,481	458	4,772	298	4,215	737
1994(forecast)	8,232	496	2,453	291	4,238	753

[a] For companies not reporting 1993 and 1994 forecasts, data extrapolated from earlier years.

TABLE 16-2
GAS UTILITY INDUSTRY CONSTRUCTION EXPENDITURES, BY TYPE OF FACILITY, 1984–1990

	1984	1985	1986	1987	1988	1989	1990
Production and Storage	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
SNG Plant	0.8	0.3	0.5	0.1	a	0.0	0.2
LNG Plant	0.4	0.5	0.6	3.3	0.3	2.4	1.6
Propane Plant	11.3	0.6	1.8	2.0	1.5	2.7	4.8
Exploration and Drilling	25.7	28.5	32.1	6.2	41.0	6.2	8.7
Other[b]	54.5	64.9	51.3	70.2	38.5	71.7	68.8
LNG Storage	5.0	3.9	10.0	14.4	15.1	6.8	11.9
Other Storage	2.2	1.4	3.7	3.8	3.6	10.2	3.9
LNG Ships	a	0.0	0.0	0.0	0.0	0.0	0.0
Transmission	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
New and Replacement Pipe	73.2	72.4	76.9	81.9	75.8	79.0	79.1
Compressor Stations	20.6	21.3	17.4	13.3	20.0	12.2	16.5
Other	6.2	6.4	5.7	4.8	4.2	8.8	4.4
Distribution	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
New and Replacement Pipe	87.5	87.5	92.4	91.1	90.0	89.1	91.2
Compressor Stations	3.9	4.5	a	0.3	0.5	0.1	0.2
Other	8.6	8.0	7.6	8.6	9.5	10.7	8.6

a. Less than 0.1 percent.
b. Includes gathering.

SECTION 17
PERSONNEL DATA

	1990	% Change 90/89
Gas Utility Employees		
(Thousands)		
Total	204.4	0.0
Distribution	64.1	0.0
Transmission	37.4	+ 0.8
Integrated	40.0	+ 0.5
Combination	50.7	+ 0.4
Municipals	12.2	0.0

PERSONNEL DATA

TABLE 17-1
GAS UTILITY INDUSTRY EMPLOYEES AND PAYROLL
1967–1990

Year	Average Number of Employees (Thousands)	Total Payroll (Thousands)	Average Wage per Employee
1967	207.2	$1,640,397	$ 7,920
1968	208.6	1,759,784	8,440
1969	210.2	1,890,490	8,990
1970	211.7	2,021,197	9,550
1971	213.7	2,142,892	10,028
1972	215.4	2,321,932	10,780
1973	215.2	2,449,075	11,381
1974	213.4	2,606,903	12,216
1975	207.6	2,817,150	13,570
1976	205.1	3,044,605	14,844
1977	208.8	3,371,856	16,149
1978	209.8	3,647,057	17,383
1979	214.6	4,134,270	19,265
1980	215.4	4,612,791	21,415
1981	220.9	5,313,445	24,057
1982	227.8	5,998,666	26,342
1983	226.3	6,365,305	28,128
1984	221.2	6,602,168	29,849
1985	216.6	6,959,057	32,132
1986	214.1	7,072,535	33,019
1987	208.3	7,092,959	34,051
1988	203.3	7,214,378	35,486
1989	204.5	7,476,192	36,558
1990	204.4	7,771,642	38,022

TABLE 17-2
GAS UTILITY INDUSTRY EMPLOYEES AND PAYROLL BY TYPE OF PAYROLL AND TYPE OF COMPANY, 1975–1990

(Thousands)

	1975	1980	1985	1987	1988	1989[R]	1990
Total							
Employees	207.6	215.4	216.6	208.3	203.3	204.5	204.4
Payroll—Total	$2,817,150	$4,612,791	$6,959,057	$7,092,959	$7,214,378	$7,476,192	$7,771,642
Operating	2,292,448	3,652,941	5,515,089	5,730,423	5,813,903	6,064,600	6,256,086
Construction	380,835	627,706	962,353	1,008,797	1,023,478	1,076,712	1,161,520
Miscellaneous	143,867	332,144	481,615	353,739	376,997	334,880	354,036
Investor Owned—Total							
Employees	196.3	202.7	204.5	196.1	191.8	192.3	192.2
Payroll—Total	$2,675,092	$4,379,653	$6,629,132	$6,724,752	$6,872,181	$7,082,533	$7,354,526
Operating	2,184,446	3,463,437	5,227,943	5,425,114	5,537,099	5,740,445	5,916,203
Construction	357,221	594,326	993,035	962,186	979,490	1,026,387	1,105,716
Miscellaneous	133,425	321,890	468,154	337,452	355,592	315,701	332,607
Distribution							
Employees	51.3	52.1	61.8	59.5	59.6	64.1	64.1
Payroll—Total	$697,552	$1,040,436	$1,736,309	$1,846,586	$1,928,748	$2,225,857	$2,329,002
Operating	567,947	831,076	1,407,131	1,496,386	1,558,564	1,802,679	1,870,590
Construction	98,257	152,964	233,723	255,620	266,262	305,957	326,549
Miscellaneous	31,348	56,396	95,455	94,580	103,922	117,221	131,864
Transmission							
Employees	37.2	45.2	46.3	44.3	42.8	37.1	37.4
Payroll—Total	$574,275	$1,178,706	$1,786,918	$1,706,315	$1,717,643	$1,591,434	$1,622,839
Operating	470,418	873,199	1,341,552	1,424,333	1,444,243	1,354,488	1,379,395
Construction	53,832	108,974	156,730	127,362	123,149	114,793	136,373
Miscellaneous	50,025	196,533	288,636	154,620	150,251	122,153	107,071
Integrated							
Employees	55.4	53.2	43.3	40.9	40.4	40.2	40.0
Payroll—Total	$676,967	$1,061,520	$1,355,107	$1,312,852	$1,319,878	$1,299,892	$1,354,563
Operating	548,291	873,837	1,158,017	1,101,633	1,101,333	1,105,109	1,134,080
Construction	91,439	138,062	146,519	170,519	173,589	173,872	185,743
Miscellaneous	37,237	49,621	50,571	40,700	44,956	20,911	34,739
Combination							
Employees	52.4	52.2	53.1	51.4	49.0	50.9	50.7
Payroll—Total	$726,298	$1,098,991	$1,750,798	$1,858,999	$1,905,912	$1,980,657	$2,048,122
Operating	597,790	885,325	1,321,243	1,402,762	1,432,959	1,491,535	1,532,138
Construction	113,693	194,326	396,063	408,685	416,490	433,619	457,051
Miscellaneous	14,815	19,340	22,660	47,552	56,463	55,502	58,933

R–Revised.
Note: Data by company type not directly comparable from year to year due to acquisitions and mergers. See page ix.

PERSONNEL DATA

TABLE 17-3
EMPLOYEE ACCIDENT INCIDENT AND SEVERITY RATES OF SELECTED INDUSTRIES, 1990

	Rate	
	Incident	Severity
Gas Utilities[b]	**2.4**	**17.1**
All Industries	**2.2**	**25.9**
Agricultural Chemicals	0.5	22.0
Aircraft	2.1	29.0
Air Transportation	2.3	13.9
Coal	1.3	27.7
Cement	3.7	20.0
Chemical	0.6	23.3
Communications	0.8	18.8
Construction	2.6	29.6
Electric, Electronic Equipment	1.6	21.9
Electric Service	1.0	22.0
Fabricated Metal Products	2.2	23.6
Food	3.4	21.8
Furniture and Fixtures	2.4	15.4
General Government	5.5	16.2
Iron and Steel Foundries	1.6	22.5
Leather	2.1	30.5
Lumber and Wood Products	3.5	27.1
Industrial Machinery	2.0	22.5
Meat Products	4.9	19.2
Metal Mining	2.0	35.5
Motor Vehicles	4.7	26.6
Nonferrous Rolling, Drawing	1.6	27.5
Nonmetallic Minerals, Except Fuels	1.5	33.3
Oil and Gas Extraction	0.6	25.0
Paper	1.9	29.5
Petroleum and Coal Products	0.7	24.3
Pipeline Transportation	1.1	22.7
Primary Nonferrous Metals	1.8	25.0
Printing and Publishing	3.1	17.4
Railroad Equipment	4.7	25.5
Railroad Transportation	4.6	59.1
Rubber and Plastics	2.0	22.5
Services	2.3	15.2
Ship and Boat Building	2.9	14.1
Stone, Clay and Glass	2.8	30.0
Textile	0.6	36.7
Local, Suburban Transportation	11.0	19.6
Trucking and Warehousing	17.1	30.1
Water Transportation	3.0	38.0
Wholesale and Retail Trade	2.3	23.5

a. Incident rate is the number of disabling injuries per 100 full-time employees. Severity rate is average lost workdays per injury.
b. Gas figures derived from National Safety Council data.
Source: National Safety Council, *Accident Facts*, 1991.

TABLE 17-4
DEATH RATES OF WORKERS, BY MAJOR INDUSTRIES, 1989

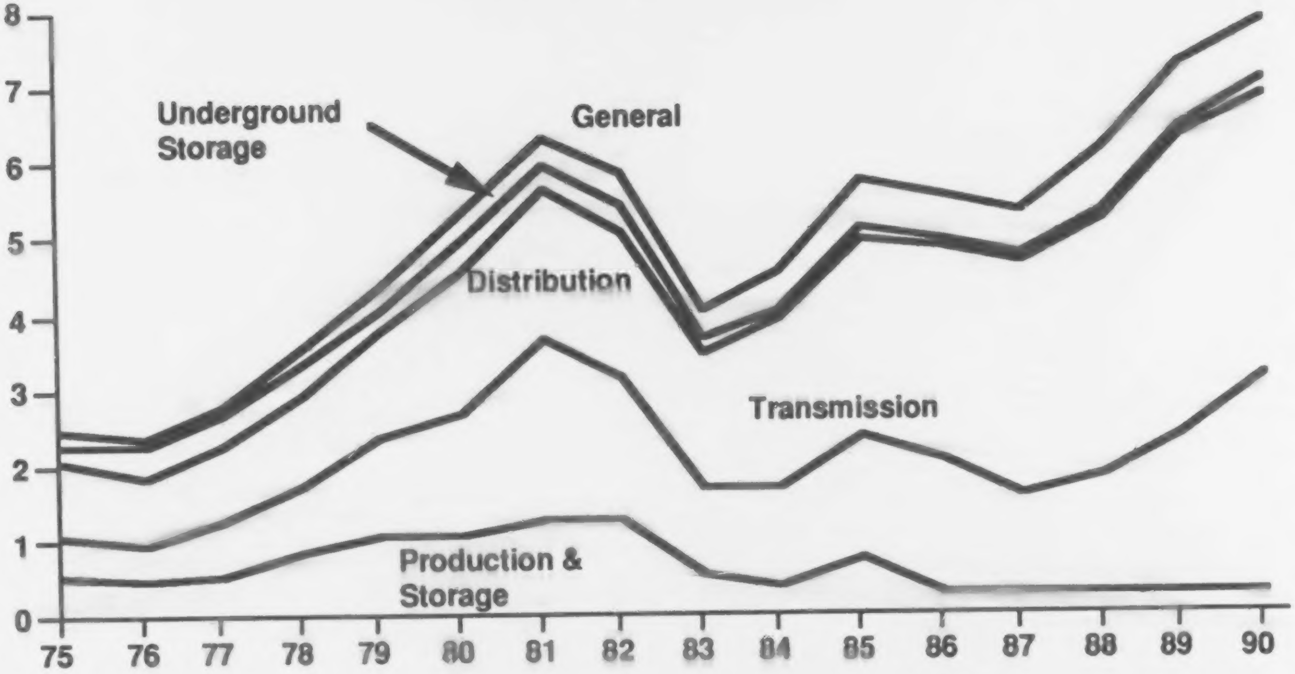
	Deaths	
	Total	Per 100,000 Workers
All Industries	**10,400**	9
Agriculture	1,300	40
Construction	2,100	32
Government	1,600	9
Manufacturing	1,100	6
Mining, Quarrying, Oil and Gas Wells	300	43
Service	1,500	4
Trade	1,100	4
Transportation and Public Utilities	1,400	24
Gas[a]	3	1.54

a. Included in Transportation and Public Utilities. Data derived from A.G.A. *Report of Occupational Injuries and Illnesses in the Gas Utility and Transmission Industry in the United States*, and does not represent total industry.
Source: National Safety Council; *Accident Facts*, 1990: gas figures derived from A.G.A. data.

CHART 16-1

GAS UTILITY INDUSTRY CONSTRUCTION EXPENDITURES

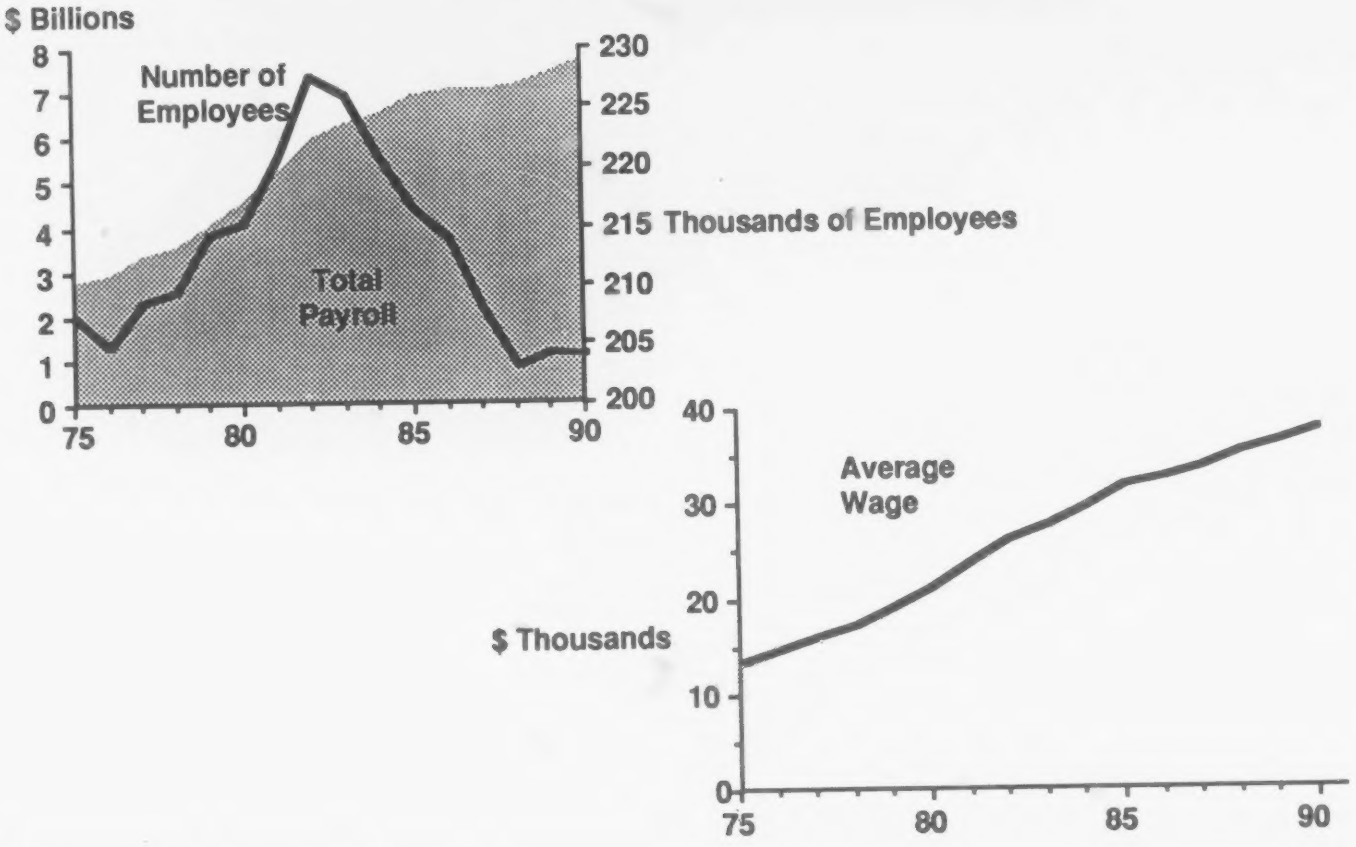
(BILLIONS OF DOLLARS)



REFERENCE: TABLE 16-1

CHART 17-1

GAS UTILITY INDUSTRY PAYROLL, EMPLOYEES AND AVERAGE WAGE



REFERENCE: TABLE 17-1

TABLE 17-5
EMPLOYEE DISABLING INJURY RATES, BY TYPE OF GAS UTILITY, 1970-1990

Z16.1 DATA

	All Reporting Gas Utilities				Natural Gas Distribution and Integrated Companies		Natural Gas Transmission Companies		Natural Gas Combination Companies[a]	
	Reporting Companies		Rate[b]		Rate		Rate		Rate	
Year	Number	Average Employees	Frequency[c]	Severity[d]	Frequency[c]	Severity[d]	Frequency[c]	Severity[d]	Frequency[c]	Severity[d]
1970	719	200,493	6.34	548	6.66	522	5.02	686	-e	e
1971	833	210,589	7.15	473	7.48	444	5.70	634	e	e
1972	736	205,371	8.38	535	8.98	495	5.88	762	e	e
1973	708	207,423	8.18	547	8.77[f]	373[f]	5.67	1,287	e	e
1974	644	208,283	9.08	357	9.75[g]	362[g]	6.12	333	e	e
1975	515	193,957	9.27	570	9.99[g]	518[g]	6.37	785	e	e
1976	407	153,538	11.17	365	12.87[g]	403[g]	5.31	236	e	e

OSHA DATA

	All Reporting Gas Utilities				Natural Gas Distribution and Integrated Companies		Natural Gas Transmission Companies		Natural Gas Combination Companies	
	Reporting Companies		Rate		Rate		Rate		Rate	
Year	Number	Average Employees	Incident[h]	Severity[i]	Incident[a]	Severity[i]	Incident[h]	Severity[i]	Incident[h]	Severity[i]
1977	433	243,773	2.46	18.01	3.31	15.86	1.09	20.63	2.00	20.54
1978	423	236,661	2.46	17.11	3.41	14.86	1.10	22.51	2.10	18.90
1979	443	256,797	2.52	16.76	3.57	15.01	1.16	24.71	1.97	17.81
1980	453	262,173	2.62	18.20	3.45	14.28	1.15	32.17	2.26	21.34
1981	437	278,402	2.52	25.09	3.43	17.08	1.09	26.34	2.17	37.53
1982	424	275,725	2.33	18.36	3.39	13.63	1.13	23.10	1.90	24.30
1983	431	272,236	2.33	18.02	3.44	13.91	1.09	20.55	1.82	24.66
1984	415	254,765	2.52	16.01	3.67	13.20	1.02	19.60	1.91	21.11
1985	439	229,658	2.36	17.12	3.64	14.28	1.07	47.02	1.13	15.14
1986	419	224,696	2.37	17.68	3.49	16.06	0.95	38.21	1.58	15.56
1987	331	187,997	2.30	18.84	3.08	16.86	1.17	39.91	1.59	16.95
1988	345	198,868	2.07	17.62	3.02	16.84	0.86	23.45	1.21	18.64
1989	375	189,976	2.30	16.85	3.15	15.75	1.06	24.26	1.68	17.38
1990	370	195,251	2.10	18.17	2.96	16.01	0.89	29.21	1.50	20.69

a. Included in "Natural Gas Distribution" and "Integrated Companies" under Z16.1 data.
b. Includes "Manufactured and Mixed Gas" and "Liquefied Petroleum Gas."
c. Frequency Rate is number of disabling injuries per million man-hours worked for each injury resulting in a minimum of one day's loss of time.
d. Severity Rate is number of days lost due to disabling injuries, per million man-hours worked.
e. Not available under Z16.1 data.
f. Includes "Manufactured and Mixed Gas."
g. Includes "Manufactured and Mixed Gas" and "Liquefied Petroleum Gas."
h. Incident Rate is total injuries per 100 full-time employees.
i. Severity Rate is average lost workdays per injury.

Source: A.G.A. *Disabling Injury Experience*, 1990.

Note: Companies are now required to report under the Occupational Safety and Health Act (OSHA) instead of ANST Standard Z16.1.

APPENDIX A
GLOSSARY

(This is an abbreviated list of gas utility industry definitions. A complete list is contained in the *Glossary for the Gas Industry*).

Accident Frequency Rate: See Injury Frequency Rate, Disabling.

Accident Incident Rate: See Injury Incident Rate.

Accident Severity Rate: See Injury Severity Rate, Disabling.

Additions (To Utility Plant):

Gross Additions: Expenditures for construction (including Allowance for Funds Used During Construction) and/or utility plant purchased and acquired.

Net Additions: Gross additions less retirements and adjustments of utility plant. It is the net change in utility plant between two dates.

Anthracite Coal: A hard, black, lustrous coal that burns efficiently, containing a higher percentage of fixed carbon and a low percentage of volatile matter differing from bituminous, and generally having a heating value of 11,000-12,000 Btu/lb. Commonly referred to as hard coal; it is mined in the U.S., mainly in eastern Pennsylvania, although in small quantities in other states. Most of the anthracite is used as a fuel in household heating systems. When anthracite burns, it produces almost no smoke.

Associated Natural Gas: See Gas, Natural.

Associated Number of Customers: See Customers, Average Number of.

Average Revenue Per Unit of Gas Sales (By Class of Service): Revenue from the sale of gas to a class of service, exclusive of forfeited discounts and penalties, divided by the corresponding number of units sold. Units may be therms, Btu's, or cubic feet.

Barrel (Oil): A volumetric unit of measurement equivalent to 42 U.S. standard gallons, 9,702 cubic inches, 5.6146 cubic feet, 34.9722 Canadian Imperial gallons, 158.99 liters, or .15899 cubic meters. It is the unit of measurement commonly used to measure oil production and oil reserves within the U.S.

Bcf: 1,000,000,000 cubic feet; Billion cubic feet.

Bituminous Coal: Ranking of soft coal generally having a heating value of 11,000–13,000 Btu/lb., high in volatile matter and ash.

Blue Gas: See Water Gas.

Boiler Fuel Gas: Natural gas used as a fuel for the generation of steam (or hot water).

Bottled Gas: In the industry, liquefied petroleum gas contained under moderate pressure in cylinders, sometimes referred to as bottles. Usually propane and/or butane.

British Thermal Unit (Btu): The quantity of heat necessary to raise the temperature of one pound of water one degree Fahrenheit from 58.5 to 59.5 degrees Fahrenheit under standard pressure of 30 inches of mercury at or near its point of maximum density. One Btu equals 252 calories (gram), 778 foot-pounds, 1,055 joules and 0.293 watt hours.

By-Products (Residuals): Secondary products which are obtained from the processing of a raw material and have commercial value. They may be the residues of the gas production process, such as coke, tar, and ammonia. or they may be the result of further processing of such residues, such as ammonium sulphate.

Capacity, Effective: The maximum load which a machine, apparatus, device, plant or system is capable of carrying under existing service conditions.

Carbon Black: Almost pure amorphous carbon consisting of extremely fine particles, usually produced from gaseous or liquid hydrocarbons by controlled combustion with a restricted air supply or by thermal decomposition.

Casinghead Gas: Unprocessed natural gas containing natural gasoline and other liquid hydrocarbon vapors produced from oil well. Frequently called WET GAS, ASSOCIATED GAS (but not all wet gas or associated gas is casinghead gas), and in the past, BRADENHEAD GAS. Technically, the term should apply only to gas produced from the casing of an oil well, and not from the tubing, but it is often applied to any gas produced in association with oil.

City Gate (Town Border Station): See Gate Station.

Class of Service: Defines the type of customer. The common classes of service applied to ultimate consumers, and considerably more completely described in the A.G.A. publication "Definitions of a Gas Customer and Classes of Service for Industry Reporting Purposes" are:

1. **Residential Service**
   Covers service to customers for domestic purposes (single, multifamily or mobile homes, etc.). In residential service, the number of housing units within a structure determines the customer classification.
2. **Commercial Service**
   Covers service to customers engaged in wholesale or retail trade, agriculture, communications, finance, fisheries, forestry, government, insurance, real estate, transportation, etc., and to customers not directly involved in other classes of service.
3. **Industrial Service**
   Covers service to customers engaged primarily in a process which either involves the extraction of raw materials from the earth, or a change of raw or unfinished materials into another form or product.
4. **Other Services**
   Service to municipalities or divisions (agencies) of State or Federal Governments under special contracts or agreements or service classifications, which are applicable only to public authorities using gas for general or institutional purposes. (Exclude sales properly included under items 2 or 3 above, such as manufacturing arsenals or publicly-owned power systems).
5. **Sales for Resale** (Uniform System of Accounts, 483)
   Service to other utility companies, governmental agencies (municipal, county, state or federal), rural cooperatives, etc., for distribution and resale to ultimate customers. Service to other utilities for use by them and not for distribution and resale, is to be classified as residential, commercial, or industrial, depending upon the primary business or economic activity.

APPENDIX A

Coal Gas: Manufactured gas made by distillation or carbonization of coal in a closed coal gas retort, coke oven, or other vessel.

Combination Utility: Utility which supplies both gas and some other utility service (electricity, water, etc.). For purposes of A.G.A. statistics, a combination utility derives at least 5 percent but less than 95 percent of its total sales revenues from gas operations. See Appendix C for a partial list of combination companies.

Commercial Service: See Class of Service.

Communities (Served): A community is a contiguous built-up area, incorporated or unincorporated, commonly recognized as a separate entity. Any incorporated area and its adjacent built-up unincorporated area may be counted as one community.

Compressor Horsepower: See Horsepower, Compressor.

Compressor Station: Any permanent combination of facilities which supplies the energy to move gas at increased pressure from fields, in transmission lines or into storage. For reporting to A.G.A. include field (other than temporary) line, and storage compressor stations of producing and transmission companies; distribution companies should include underground storage compressor stations and stations used for transporting gas between local distribution systems but not booster or pumping stations used within a local distribution system.

Condensate: The liquid resulting when a vapor is subjected to cooling and pressure reduction. Also, liquid hydrocarbons condensed from gas and oil wells. Compare Liquids, Natural Gas.

Construction Expenditures: Cost of construction, including work-in-progress (CWIP), overhead or contributions in aid of construction and allowances for funds used during construction (AFUDC), for additions to, renewals and replacements of plant facilities, but excluding the purchase cost of an acquired operating unit or system of utility plant, accounting transfers and adjustments to utility plant, and cost to remove plant facilities from service.

Conversion to Natural Gas: Changing the gas service to ultimate customers from a fuel other than natural gas to natural gas, including adjustment of consumers' appliances to perform satisfactorily with natural gas. Natural gas does not necessarily mean straight natural gas; stabilizing the heat content of the sendout gas by diluent gases or enriching gases is not considered to change the basic character of natural gas. For the purpose of uniform reporting a company should be considered a natural gas company when 95 percent of the system has been converted.

Cubic Foot: The most common unit of measurement of gas volume. It is the amount of gas required to fill a volume of one cubic foot under stated conditions of temperature, pressure, and water vapor.

Current Gas: See Storage, Underground.

Cushion Gas: The gas required in a reservoir, used for storage of natural gas, so that reservoir pressure is such that the storage gas may be recovered.

Customer: An individual, firm or organization which purchases service at one location under one rate classification, contract, or rate schedule. If service is supplied at more than one location or under more than one rate schedule, each location and rate schedule shall be counted as a separate customer unless the consumption at the several locations is combined before billing and billed on one rate schedule. See class of service.

Customers, Average Number of: The average number of customers is determined by summing the customers for each of the periods involved and dividing by the number of periods. See Customer.

Customers, End of Year: The number of customers at December (or the last month of a fiscal year) including all billing cycles. See Customers, Average Number of.

Degree Day, Heating: A measure of the coldness of the weather experienced, based on the extent to which the daily mean temperature falls below a reference temperature, usually 65°F. For example, on a day when the mean outdoor dry-bulb temperature is 35°F., there would be 30 degree days experienced. A daily mean temperature usually represents the sum of the high and low readings divided by two.

Degree Day Normal: The simple arithmetic average of monthly or annual degree days (usually for a 30-year period). May be a simple degree day normal or population-weighted degree day normal.

Demand: The rate at which gas is delivered to or by a system, part of a system, or a piece of equipment, expressed in cubic feet or therms or multiples thereof, for a designated period of time called the demand interval. Compare Load.

Design Day: A 24-hour period of demand which is used as a basis for planning gas capacity requirements.

Design Day Availability: The amount of each type of gas arranged to be available on the design day and the maximum combination of such supplies. (In the case of purchased natural gas, the maximum day allocation, maximum day contract quantity, or FERC authorization).

Design Day Temperature: The mean temperature assumed for the Design Day.

Dissolved Natural Gas: See Gas, Natural.

Distribution Company, Gas: Company which obtains the major portion of its gas operating revenues from the operation of a retail gas distribution system, and which operates no transmission system other than incidental connections within its own system or to the system of another company. For purposes of A.G.A. statistics, a distribution company obtains at least 90 percent of its gas operating revenues from sales to ultimate customers *and* classifies at least 90 percent of mains (other than service pipe) as distribution. Compare Integrated Company, Gas; Transmission Company, Gas. See Appendix C for a partial list of Distribution Companies.

Distribution Mains: See System Type.

Distribution System, Gas: See System Type.

Dry Natural Gas: See Gas, Natural.

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Enriching: Increasing the heat content of a gas by mixing with it a gas of higher Btu content.

Exchange Gas: Gas that is received from (or delivered to) another party in exchange for gas delivered to (or received from) such other party.

Extraneous Gas: See Storage, Underground.

Field Pipeline: See System Type.

Firm Service: Service offered to customers (regardless of Class of Services) under schedules or contracts which anticipate no interruptions. The period of service may be for only a specified part of the year as in Off-Peak Service. Certain firm service contracts may contain clauses which permit unexpected interruption in case the supply to residential customers is threatened during an emergency. Compare Interruptible Service; and Off-Peak Service.

Foreign Gas: See Storage, Underground.

Gallon: A unit of liquid measure. The U.S. gallon contains 231 cubic inches or 8.3359 pounds avoirdupois of distilled water at its maximum density and with the barometer at 30 inches.

Gas, Dry: See Gas, Natural.

Gas, Liquefied Petroleum (LPG): A gas containing certain specific hydrocarbons which are gaseous under normal atmospheric conditions but can be liquefied under moderate pressure at normal temperatures. Propane and butane are the principal examples.

Gas, Manufactured: A gas obtained by destructive distillation of coal, or by the thermal decomposition of oil, or by the reaction of steam passing through a bed of heated coal or coke, or catalyst beds. Examples are coal gases, coke oven gases, producer gas, blast furnace gas, blue (water) gas, and carbureted water gas. Btu content varies widely.

Gas, Natural: A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in porous geologic formations beneath the earth's surface, often in association with petroleum. The principal constituent is methane.

Associated: Free natural gas in immediate contact, but not in solution with crude oil in the reservoir.

Dissolved: Natural gas in solution in crude oil in the reservoir.

Dry: Gas whose water content has been reduced by a dehydration process. Gas containing little or no hydrocarbons commercially recoverable as liquid product. Specified small quantities of liquids are permitted by varying statutory definition in certain states.

Liquefied (LNG): Natural gas which has been liquefied by reducing its temperature to minus 260°F at atmospheric pressure. It remains a liquid at −116°F and 673 psig. In volume it occupies 1/600 of that of the vapor.

Liquids: Those liquid hydrocarbon mixtures which are gaseous at reservoir temperatures and pressures but are recoverable by condensation or absorption. Natural gasoline and liquefied petroleum gases fall in this category.

Non-Associated: Free natural gas not in contact with, nor dissolved in, crude oil in the reservoir.

Sour: Gas found in its natural state, containing such amount of compounds of sulphur as to make it impractical to use, without purifying, because of its corrosive effect on piping and equipment.

Substitute: A gas manufactured from carbonaceous material whose characteristics are substantially interchangeable with natural gas. The resultant gas is composed primarily of methane. At this writing, SNG feedstocks are the light hydrocarbons, propane, butane and the naphthas. Development is underway of processes for production from heavier feedstocks, coal, peat and solid wastes.

Sweet: Gas found in its natural state, containing such small amount of compounds of sulphur that it can be used without purifying, with no deleterious effect on piping and equipment.

Wet: Wet natural gas is unprocessed natural gas or partially processed natural gas produced from strata containing condensable hydrocarbons. The term is subject to varying legal definitions as specified by certain state statutes. (The usual maximum allowable is 7 lbs./MMcf water content and .02 gallons/Mcf of Natural Gasoline.)

Gas, Oil: A gas resulting from the thermal decomposition of petroleum oils, composed mainly of volatile hydrocarbons and hydrogen. The true heating value of oil gas may vary between 800 and 1600 Btu per cubic foot depending on the operating conditions and feedstock properties.

Gas, Substitute Natural (SNG): See Gas, Natural.

Gas Transported for Others: That volume of gas owned by another company received into and transported through any part of the transmission system under a transportation tariff.

Gate Station: Generally, a location at which gas changes ownership, from one party to another, neither of which is the ultimate consumer. It should be noted, however, that the gas may change from one system to another at this point without changing ownership. Also referred to as city gate station, town border station, or delivery point.

Gathering Pipeline: See System Type.

Heating Value: The amount of heat produced by the complete combustion of a unit quantity of fuel. The gross or higher heating value is that which is obtained when all of the products of combustion are cooled to the temperature existing before combustion, the water vapor formed during combustion is condensed, and all the necessary corrections have been made. The net or lower heating value is obtained by subtracting the latent heat of vaporization of the water vapor formed by the combustion of the hydrogen in the fuel, from the gross or higher heating value.

Holder, Gas: A gas-tight receptacle or container in which gas is stored for future use. (1) at approximately constant pressure (low pressure containers) in which case the volume of the container changes; and (2) in containers of constant volume (usually high pressure containers) in which case the quantity of gas stored varies with the pressure.

Holding Company: A gas holding company is a corporation that is formed for the purpose of owning stock in other gas companies.

Horsepower, Compressor: The horsepower rating on the nameplate.

Horsepower, (HP): A unit of power; equivalent to 33,000 foot-pounds per minute, or 550 foot-pounds per second (mechanical horsepower), or 0.746 kilowatts.

Hydrocarbon: A chemical compound composed solely of hydrogen and carbon. The compounds having a small number of carbon and hydrogen atoms in their molecule are usually gaseous; those with a larger number of atoms are liquid, and the compounds with the largest number of atoms are solid.

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Industrial Service: See Class of Service.

Injury Frequency Rate, Disabling: Number of disabling injuries per million man-hours worked. Such injuries include disabilities and fatalities arising out of and occurring during the course of employment. A disabling injury is one which renders the employee unable to return to work on one or more days after the injury.

Injury Incident Rate: Number of injuries per 100 full-time employees.

Injury Severity Rate, Disabling: Number of days lost due to disabling per million manhours worked, including appropriate time charges according to a predetermined schedule for permanent disability cases and/or fatalities. Subsequent to 1976, severity rate is average lost workdays per injury.

Integrated Company, Gas: A company which obtains a significant portion of its gas operating revenues from the operations of both a retail gas distribution system and gas transmission system. For purposes of A.G.A. statistics, an integrated company obtains less than 90 percent but more than 10 percent of its gas operating revenues from either its retail or transmission operations or does not meet the classification of mains established for distribution or transmission companies. Compare Distribution Company, Gas; Transmission Company, Gas. See Appendix C for a partial list of Integrated Companies.

Interruptible Service: Low priority service offered to customers under schedules or contracts which anticipate and permit interruption on short notice, generally in peak-load seasons, by reason of the claim of firm service customers and higher priority users. Gas is available at any time of the year if the supply is sufficient and the supply system is adequate.

Line Pack, Gas Delivered from: That volume of gas delivered to the markets supplied by the net change in pressure in the regular system of mains, transmission and/or distribution. For example, the change in the content of a pipeline brought about by the deviation from steady flow condition.

Liquefied Natural Gas (LNG): See Gas, Natural.

Liquefied Petroleum Gas (LPG): See Gas, Liquefied Petroleum.

Load: The amount of gas delivered or required at any specified point or points on a system; load originates primarily at the gas consuming equipment of the customers. Also, to load a pressure regulator is to set the regulator to maintain a given pressure as the rate of gas flow through the regulator varies. Compare Demand.

Local Storage: See Storage, Local.

Mcf: The quantity of natural gas occupying a volume of one thousand (1,000) cubic feet at a temperature of sixty degrees Fahrenheit (60°F) and at a pressure of fourteen and seventy-three hundredths pounds per square inch absolute (14.73 psia).

MMBtu: A thermal unit of energy equal to 1,000,000 Btu, that is equivalent of 1,000 cubic feet of gas having a heat content of 1,000 Btu per cubic foot, as provided by contract measurement terms.

MMcf: 1,000,000 cubic feet; Million cubic feet; see Cubic Foot.

Main: A distribution line that serves as a common source of supply for more than one gas service line.

Distribution Mains: See System Type.

Field and Gathering Pipeline: See System Type.

Transmission Pipeline: See System Type.

Manufactured Gas: See Gas, Manufactured.

Marketable Natural Gas: Raw gas from which certain hydrocarbons and non-hydrocarbon compounds have been removed by processing. Marketable natural gas is often referred to as pipeline gas, residue gas, or sales gas.

Maximum Day:

Allocation: See Design Day Availability.

Sendout: See Sendout, Maximum Day.

Minimum Day: See Sendout, Minimum Day.

Naphtha: A loosely defined petroleum fraction containing primary aliphatic (linear) hydrocarbons with boiling points ranging from 125° to 240°C. It is thus intermediate between gasoline and kerosene, and contains components of both. Its principal uses are in solvents and paint thinners and as a raw material for the production of organic chemicals, but it has been used as a raw material for the production of synthetic natural gas.

Native Base Gas: See Storage, Underground.

Natural Gas: See Gas, Natural.

Natural Gas, Associated: See Gas, Natural.

Natural Gas, Dissolved: See Gas, Natural.

Natural Gas, Dry: See Gas, Natural.

Natural Gas, Liquefied: See Gas, Natural.

Natural Gas Liquids: See Gas, Natural.

Natural Gas, Non-Associated: See Gas, Natural.

Natural Gas Reserves: See Reserves.

Natural Gas, Sour: See Gas, Natural.

Natural Gas, Sweet: See Gas, Natural.

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Natural Gas, Wet: See Gas, Natural.

Natural Gasoline: Liquid removed from natural gas by absorption or refrigeration and containing hydrocarbons heavier than butane.

Off-Peak Service: Service made available on special schedules or contracts but only for a specified part of the year during the off-peak season. Compare Interruptible Service.

Oil Gas: See Gas, Oil.

Oil, Heavy: Heavy, thick and viscous oils. Usually refinery residuals commonly specified as grades 5 and 6.

Oil, Light: Generally, all oils lighter than residual fuel oils No. 5 and No. 6. Oils that have a low specific gravity, usually products of controlled distillation of crude oil but also including by-product benzol and toluol.

Peak Day: The one day (24 hours) of maximum system deliveries of gas during a year. Peak day data are used to, among other things, determine the allocation of certain costs between classes of service. See Design Day.

Peak Shaving: The use of fuels and equipment to generate or manufacture gas to supplement the normal supply of pipeline gas during periods of extremely high demand. This method prevents the expensive alternative of expanding pipeline facilities.

Pipeline: All parts of those physical facilities through which gas is moved in transportation, including pipe, valves and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders and fabricated assemblies. See System Type.

Pressure, Absolute (PSIA): Pressure in excess of a perfect vacuum. Absolute pressure is obtained by algebraically adding guage pressure to atmospheric pressure. Pressures reported in "atmospheres" are understood to be absolute. Absolute pressure must be used in equations of state and in all gas-law calculations. Guage pressures below atmospheric pressure are called vacuum.

Pressure, Gauge (psig): Pounds per square inch above atmospheric pressure.

Producer Gas (Also, Manufactured Gas): A combustible gas made in a furnace or apparatus by circulating air or a mixture of air and steam through a layer of incandescent material consisting chiefly of carbon monoxide, hydrogen and nitrogen.

Propane (C_3H_8): A gas, the molecule of which is composed of three carbon and eight hydrogen atoms. Propane is present in most natural gas and is the first product refined from crude petroleum. It has many industrial uses and may be used for heating and lighting. Contains approximately 2,500 Btu per cubic foot.

Recoverable Natural Gas Reserves: See Reserves, Estimated Proved Natural Gas Reserves.

Refinery Gas: See Gas, Oil.

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Reforming: A chemical process using heat in presence of a catalyst to break down a substance into desired components, such as in the reforming of natural gas or light oils into lower Btu fuel gas.

Repressuring: Forcing gas, under pressure, into the oil reservoir in an attempt to increase the recovery of crude oil; also done with water.

Resale Service: See Class of Service, Sales for Resale.

Reserves, Energy: Refers to the bank of natural resources, such as natural gas, natural gas liquids, petroleum, coal, lignite, and energy available from water power, and solar and geothermal energy.

Estimated Potential Natural Gas Reserves: Refers to an estimate of the remaining natural gas in a specified area which are judged to be recoverable.

Estimated Proved Natural Gas Reserves: An estimated quantity of natural gas which analysis of geologic and engineering data demonstrate with reasonable certainty to be recoverable in the future from known oil and gas reservoirs, under anticipated economic and current operating conditions. Reservoirs that have demonstrated the ability to produce by either actual production [illegible] conclusive formation test are considered proved.

Saturation, Appliance or Customer: The number of specified appliances, or users, divided by the basic units or total potential of the universe involved, i.e., Gas Heating Saturation related to customers is the total number of customers with space heating divided by the total number of customers. Saturation should not be used alone but should be associated with customers, families, households, population or other qualifying terms indicating the universe referred to. For industry statistics, saturation based on customers served is used.

Sendout, Gas: Total gas produced, purchased (including exchange gas receipts), or net withdrawn from underground storage within a specified time interval, measured at the point(s) of production and/or purchase, and/or withdrawal, adjusted for changes in local storage quantity. It comprises gas sales, exchange deliveries, gas used by company and unaccounted for gas. Expressed in various units such as therms, Btu's, cubic feet, etc.

Sendout, Maximum Day: The greatest actual total gas sendout occurring in a specified 24-hour period. Compare Design Day; Peak Day.

Sendout, Minimum Day: The smallest actual total gas sendout occurring in a specified 24-hour period.

Service (Service Line, Service Pipe): The pipe which carries gas from the main to the customer's meter. Compare Class of Service.

Shrinkage, Natural Gas: The reduction in volume of wet natural gas due to the extraction of some of its constituents, such as hydrocarbon products, hydrogen sulfide, carbon dioxide, nitrogen, helium, and water vapor.

Storage, Buried Pipe (Bottle-Type Holder): A system of storage in especially designed high pressure pipe sections or bottles capable of storing natural gas at pressures near or equal to the pressure of maximum super-compressibility. Not storage in ordinary steel pipe.

Storage, Local: The storage facilities, other than underground storage, that are an integral part of a distribution system, i.e., on the distribution side of the city gate, whether for manufactured, mixed, natural, liquefied petroleum, or liquefied natural gases.

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Storage Mains: Those mains used primarily for injection and withdrawal of gas to and from underground storage.

Storage, Underground: The utilization of subsurface facilities for storing gas which has been transferred from its original location for the primary purposes of load balancing. The facilities are usually natural geological reservoirs such as depleted oil or gas fields or waterbearing sands sealed on the top by an impermeable cap rock. The facilities also may be manmade or natural caverns.

Aquifer Storage: The storage of gas underground in porous and permeable rock stratum, the pore space of which was originally filled with water and in which the stored gas is confined by suitable structure, permeability barriers and hydrostatic water pressure.

Base Gas (Also called cushion gas): The total volume of gas which will maintain the required rate of delivery during an output cycle.

Current Gas: The total volume of gas in a storage reservoir which is in excess of the base gas. Also called Working Gas.

Extraneous Gas: See Stored Gas, this section.

Foreign Gas: See Stored Gas, this section.

Native Gas: The total volume of gas indigenous to the storage reservoir.

Storage Reservoir: That part of the storage zone having a defined limit of porosity and/or permeability which can effectively accept, retain, and deliver gas.

Storage Well: A cased bore hole, extending from the surface into the storage zone, which is used primarily for gas input and/or output purposes.

Stored Gas: Gas physically injected into a storage reservoir.

Ultimate Reservoir Capacity: The total estimated volume of gas that could be contained in storage reservoir when it is developed to the maximum design pressure.

Working Gas: Gas in an underground storage field that is available for market. May also be called Current Gas.

Straight Gas Utility: Company which derives the major portion of its total operating revenues from gas operations. For purposes of A.G.A. statistics, a straight gas utility derives at least 95 percent of its total operating revenues from gas operations. See Combination Gas Utility.

Subbituminous Coal: Ranking of soft coal generally having a heating value of 8,300–13,000 Btu's/lb-high volatile matter and ash.

Substitute Natural Gas: See Gas, Natural.

System Type:

Distribution: Generally mains, services, and equipment which carry or control the supply of gas from the point of local supply to and including the sales meters. The system operates at various pressures as indicated below.

High Pressure: A system which operates at a pressure higher than the standard service pressure delivered to the customer; thus, a pressure regulator is required on each service to control pressure delivered to the customer. Sometimes this is referred to as medium pressure.

Low Pressure or Utilization Pressure: A system in which the gas pressure in the mains and service lines is substantially the same as that delivered to the customers' appliances; ordinarily a pressure regulator is not required on individual service lines.

Field and Gathering: A network of pipelines (mains) transporting natural gas from individual wells to compressor station, processing point, or main trunk pipeline.

Main: The network of distribution piping to which customers' service lines are attached. Generally large pipes are laid in principal streets with smaller laterals extending along side streets and connected at their ends to form a grid; sometimes laterals are brought to dead ends. Compare with Distribution, this section.

Transmission: Pipelines (Mains) installed for the purpose of transmitting gas from a source or sources of supply to one or more distribution centers, or to one or more large volume customers, or a pipeline installed to interconnect sources of supply. In typical cases transmission lines differ from gas mains in that they operate at higher pressures, are longer, and the distance between connections is greater.

Tcf: 1,000,000,000,000 cubic feet; Trillion cubic feet.

Therm: A unit of heating value equivalent to 100,000 British thermal units (Btu).

Transmission Company, Gas: A company which obtains at least 90 percent of its gas operating revenues from sales for resale and/or transportation of gas for others and/or main line sales to industrial customers *and* classifies at least 90 percent of mains (other than service pipe) as field and gathering, storage and/or transmission. Compare Distribution Company, Gas; Integrated Company, Gas. See Appendix C for a partial list of Transmission companies.

Transmission Pipeline: See System Type.

Transmission System: See System Type.

Transportation Volumes to End-Users: Volumes of gas owned by the ultimate consumer (end-user) and delivered to the ultimate consumer's meter by the transporter.

Ultimate Customer: The customer who purchases gas for consumption and not for resale purposes.

Ultimate Reservoir Capacity: See Storage, Underground.

Unaccounted for Gas: The difference between the total gas available from all sources and the total gas accounted for as sales, net interchange and company use. This difference includes leakage or other actual losses, discrepancies due to meter inaccuracies, variations of temperature and/or pressure, and other variants, particularly due to measurements being made at different times. In cycle billings, an amount of gas supply used but not billed as of the end of a period. Compare Sendout, Gas.

Underground Storage: See Storage, Underground.

Water Gas (Blue Gas): Made by passing steam over hot coke or other carbonaceous material; it consists of carbon monoxide and hydrogen with varying amounts of carbon dioxide and nitrogen. It burns with a blue flame.

Well, Wildcat: An exploratory well being drilled in unproven territory, that is, in a horizon from which there is no production in the general area.

Wet Natural Gas: See Gas, Natural.

Working Gas: See Storage, Underground.

APPENDIX B
CONVERSION TABLE

The following are some frequently used units of measure and natural gas equivalents in British thermal units (Btu). Read "=" as "contains" between volumes and energy units.

The national average Btu content per cubic foot is used. For state averages, see page 76.

1 Cubic Foot (cf) = 0.02832 Cubic Meters = 1,030.0 Btu
1 Therm = 100,000 Btu ≅ 25,200 Kilocalories ≅ 100 Cubic Feet
1 Mcf = 1,000 Cubic Feet = 28.32 Cubic Meters = 1,030,000 Btu
1 M Therm = 100,000,000 Btu ≅ 25,200,000 Kilocalories
1 MMcf = 1,000,000 Cubic Feet = 1,030,000,000 Btu

Conversion examples:
(1) To convert 2,325 MMcf to trillions of Btu:
  (2,325 MMcf) (1,030,000,000 Btu/MMcf)
    = 2,394,750,000,000 Btu
    ≅ 2.3948 trillion Btu
(2) To convert 5,000 trillion Btu to millions of cubic feet:
  (5,000 trillion Btu) (1 cf/1,030.0 Btu)
    ≅ 4.854 trillion cf (Tcf)
    ≅ 4,854,369 MMcf
(2) To convert 22,150 million therms to trillions of Btu:
  (22,150 million therms) (100,000 Btu/therm)
    = 2,215,000,000 million Btu
    = 2,215 trillion Btu
(4) To convert the Btu content of 1 cubic foot at 15.05 psia to 14.73 psia:
  (1,030 Btu/cf) (14.73 psia/15.05 psia)
    ≅ 1,008.1 Btu/cf

For comparative purposes, Btu contents of various energy sources other than natural gas are shown below.*

Fuel Oil (barrel)	
Distillate	5,825,000 Btu
Residual	6,287,000 Btu
Coal (short ton)	
Bituminous and lignite	21,340,000 Btu
Anthracite	22,731,000 Btu
Electricity (kilowatt-hour)	3,412 Btu
Natural gas liquids (barrel)	3,821,000 Btu

* Department of Energy, Energy Information Administration, *Monthly Energy Review*, April 1991.

APPENDIX C
COMPANY LISTINGS

Shown below are 100 selected companies, 25 for each company type, as used in the financial and other sections of this publication. These lists are *not* meant to be *comprehensive.* Inclusion on this list does not imply individual company data may be released.

Distribution

Alabama Gas Corporation
Atlanta Gas Light Company
Berkshire Gas Company, The
Boston Gas Company
Brooklyn Union Gas Company, The
City Gas Company of Antigo, WI
Commonwealth Gas Company
Elizabethtown Gas Company
Equitable Resources Inc.
Michigan Gas Utilities Company
Minnegasco, Inc.
Mississippi Valley Gas Company
New Jersey Natural Gas Company
North Shore Gas Company
Northwest Natural Gas Company
Peoples Gas Light and Coke Company
Peoples Gas System, Inc.
Providence Gas Company
Richmond Gas Corporation
Southern Connecticut Gas Company, The
Valley Gas Company
Washington Gas Light Company
Washington Natural Gas Company
Wisconsin Gas Company
Wisconsin Natural Gas Company

Transmission

Alabama Tennessee Natural Gas Co.
Algonquin Gas Transmission Company
ANR Pipeline Company
Colorado Interstate Gas Company
Columbia Gas Transmission Corporation
Columbia Gulf Transmission Company
East Tennessee Natural Gas Company
El Paso Natural Gas Company
Enron Corporation
Great Lakes Transmission Company
Midwestern Gas Transmission Company
Natural Gas Pipeline Co. of America
Northwest Pipeline Corporation
Pacific Gas Transmission Company
Panhandle Eastern Pipe Line Company
Southern Natural Gas Company
Texas Eastern Transmission Corporation
Texas Gas Transmission Corporation
Transcontinental Gas Pipe Line Corp.
Transok Pipe Line Company
Transwestern Pipeline Company
Trunkline Gas Company
United Gas Pipeline Company
Valero Transmission Company
Western Gas Supply Company

Integrated

Arkansas Louisiana Gas Company
Arkansas Oklahoma Gas Corporation
Arkansas Western Gas Company
Battle Creek Gas Company
Columbia Gas System Inc.
Corning Natural Gas Company
East Ohio Gas Company, The
Enserch Corporation
Enstar Natural Gas Company
Great Plains Natural Gas Company
Greeley Gas Company
Intermountain Gas Company
KN Energy, Inc.
Michigan Consolidated Gas Company
National Fuel Gas Company
National Gas & Oil Corporation
North Carolina Natural Gas Corporation
North Penn Gas Company
Ohio Valley Gas Corporation
Oklahoma Natural Gas Company
Peoples Natural Gas Co., The
Public Service Company of North Carolina, Inc.
Vermont Gas Systems, Inc.
West Ohio Gas Company
Western Kentucky Gas Company

Combination

Baltimore Gas and Electric Company
Central Illinois Light Company
Cincinnati Gas and Electric Company
Consolidated Edison Co. of NY Inc.
Consumers Power Company
Dayton Power & Light Company
Florida Public Utilities Company
Illinois Power Company
Iowa Electric Light & Power Company
Iowa-Illinois Gas & Electric Company
KPL Gas Service
Long Island Lighting Company
Louisville Gas & Electric Company
Madison Gas & Electric Company
Montana-Dakota Utilities Company
Montana Power Company
Niagara-Mohawk Power Corporation
Northern Indiana Public Service Company
Pacific Gas & Electric Company
Philadelphia Electric Company
Public Service Co. of Colorado
Public Service Electric & Gas Company
San Diego Gas & Electric Company
Washington Water Power Company
Wisconsin Public Service Corporation

APPENDIX D
GAS REQUIREMENTS COMMITTEE, NATURAL GAS CONSUMPTION

The Gas Requirements Committee (GRC) is a subcommittee of the Gas Demand Committee, a board-level committee of the American Gas Association. The GRC has been publishing reports on gas consumption since 1964, and is considered one of the three major sources of comprehensive data on natural gas consumption. The Energy Information Agency (EIA) within the U.S. Department of Energy and the American Gas Association are the other two. The Statistics and Load Forecast Methods Committee of the A.G.A. has decided to include the GRC data on natural gas consumption in this edition as part of the effort to continually improve the usefulness of the data provided in *Gas Facts.*

Comparison of consumption figures published by the three above-mentioned sources for any given year would result in some discrepancies. Certainly one reasonable explanation is that the three groups use different methods in the collection and compilation of natural gas consumption data. The major differences are caused by varying definitions, sample sizes, and points of measurement.

The GRC measure of consumption is defined as adding together the end-use consumption of all gas users including company use, unaccounted for gas and field use on a national basis only. The EIA measure of consumption is defined as the sum of deliveries to consumers, lease and plant fuel, and pipeline fuel. The A.G.A. measure of consumption is restricted to sales to consumers that are made by gas utility companies *only* and, therefore, is a subset of total United States gas consumption.

It is not the intention of the Statistics and Load Forecast Methods Committee to reconcile the differences among the reported consumption data. Rather, the reader should be aware that three sources of data exist. If the reader wishes to further analyze the GRC or EIA consumption data, it is reported in the GRC *Future Gas Consumption in the United States* reports or the EIA *Natural Gas Annual* reports.

The subsequent pages excerpt the following information from GRC publications: United States gas consumption by state, region and class of service—1989, total commercial and industrial consumption by standard industrial classification—1989, and United States gas consumption by class of service, 1976–1989. At the time of printing, 1990 data were not yet available.

1989
UNITED STATES GAS CONSUMPTION BY STATE, REGION & CLASS OF SERVICE

(Millions of Cubic Feet)[a]

		Firm			
	Region and State	Residential	Commercial	Industrial	Electric Utilities
(1)	**United States Total**				
(2)	**Field Use**				
(3)	**Total Excluding Field Use**	**4,802,585**	**2,381,841**	**3,000,831**	**1,134,655**
(4)	**1. New England**	**172,612**	**94,668**	**29,262**	**0**
(5)	Connecticut	40,117	19,784	8,666	0
(6)	Maine	639	1,677	894	0
(7)	Massachusetts	105,285	60,014	16,049	0
(8)	New Hampshire	6,160	5,373	1,021	0
(9)	Rhode Island	18,285	6,372	2,601	0
(10)	Vermont	2,126	1,448	31	0
(11)	**2. Appalachian**	**1,441,975**	**598,725**	**412,579**	**20,907**
(12)	Delaware	7,602	4,208	4,691	3,051
(13)	District of Columbia	17,275	6,282	244	657
(14)	Kentucky	64,234	30,545	19,252	1,196
(15)	Maryland	76,319	16,982	23,358	8,174
(16)	New Jersey	189,302	95,404	26,307	26
(17)	New York	358,646	149,973	62,543	3,124
(18)	Ohio	365,394	148,008	130,827	3,868
(19)	Pennsylvania	270,495	104,944	117,314	597
(20)	Virginia	55,960	27,507	22,490	5
(21)	West Virginia	36,748	14,872	5,553	209
(22)	**3. Southeast**	**294,579**	**174,742**	**128,765**	**7,277**
(23)	Alabama	64,251	21,241	26,727	0
(24)	Florida	14,779	33,735	7,218	6,962
(25)	Georgia	102,312	40,101	15,695	0
(26)	North Carolina	39,857	26,969	23,194	83
(27)	South Carolina	20,637	4,484	10,957	6
(28)	Tennessee	52,743	48,212	44,974	226
(29)	**4. Great Lakes**	**1,135,790**	**503,450**	**400,080**	**19,758**
(30)	Illinois	487,011	221,453	214,905	2,744
(31)	Indiana	159,104	71,366	60,914	652
(32)	Michigan	361,110	140,462	92,127	15,863
(33)	Wisconsin	128,565	70,169	32,134	499
(34)	**5. Northern Plains**	**261,893**	**142,509**	**61,835**	**627**
(35)	Iowa	79,433	38,590	44,575	398
(36)	Minnesota	116,392	59,263	11,503	229
(37)	Nebraska	44,284	29,710	4,063	0
(38)	North Dakota	10,317	8,363	149	0
(39)	South Dakota	11,467	6,583	1,545	0
(40)	**6. Mid-Continent**	**282,577**	**121,132**	**136,406**	**195,363**
(41)	Kansas	83,539	33,334	33,732	9,150
(42)	Missouri	129,521	49,709	21,895	6
(43)	Oklahoma	69,517	38,089	80,779	186,207
(44)	**7. Gulf Coast**	**351,899**	**238,675**	**1,601,643**	**790,125**
(45)	Arkansas	43,626	23,291	117,596	23,744
(46)	Louisiana	61,624	31,712	507,952	58,722
(47)	Mississippi	27,476	17,914	52,579	2,049
(48)	Texas	219,173	165,758	923,516	705,610
(49)	**8. Rocky Mountain**	**167,851**	**96,753**	**27,828**	**3,038**
(50)	Colorado	89,079	58,692	12,986	2,711
(51)	Montana	18,350	12,871	980	327
(52)	Utah	49,497	17,582	6,429	0
(53)	Wyoming	10,925	7,608	7,433	0
(54)	**9. Pacific Southwest**	**607,550**	**336,362**	**148,330**	**65,039**
(55)	Arizona	33,490	29,624	11,666	29,848
(56)	California	517,790	267,697	119,668	3,850
(57)	Nevada	24,657	13,697	9,481	23,592
(58)	New Mexico	31,613	25,344	7,515	7,749
(59)	**10. Pacific Northwest**	**71,547**	**56,582**	**51,343**	**0**
(60)	Idaho	8,767	7,589	23,050	0
(61)	Oregon	23,154	19,899	8,547	0
(62)	Washington	39,626	29,094	19,746	0
(63)	**11. Pacific**	**14,312**	**18,243**	**2,760**	**32,521**
(64)	Alaska	13,722	15,852	2,760	32,521
(65)	Hawaii	590	2,391	0	0

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[a] Btu content equals 1,000 Btu per cubic foot.

APPENDIX D

1989 (Continued)
UNITED STATES GAS CONSUMPTION BY STATE, REGION & CLASS OF SERVICE

(Millions of Cubic Feet)[a]

Interruptible					
Commercial	Industrial	Electric Utilities	Other	Total Consumption	
				19,043,907	**(1)**
				1,220,000	**(2)**
433,680	**3,673,795**	**1,711,865**	**684,655**	**17,823,907**	**(3)**
16,457	**33,935**	**33,845**	**13,862**	**394,641**	**(4)**
8,572	11,428	3,286	4,323	96,176	(5)
0	906	0	10	4,126	(6)
5,258	17,027	29,905	7,530	241,068	(7)
0	939	21	816	14,330	(8)
1,988	1,840	564	988	32,638	(9)
639	1,795	69	195	6,303	(10)
127,616	**466,174**	**272,949**	**162,691**	**3,503,616**	**(11)**
0	2,233	2,962	25	24,772	(12)
9,349	117	0	1,868	35,792	(13)
2,762	39,078	106	10,901	168,074	(14)
8,810	45,435	20,003	10,927	210,008	(15)
27,230	53,174	57,306	19,012	467,761	(16)
21,699	29,633	185,163	30,040	840,821	(17)
15,285	138,749	641	16,343	819,115	(18)
23,415	96,997	0	44,130	657,892	(19)
11,461	26,695	6,631	10,166	160,915	(20)
7,605	34,063	137	19,279	118,466	(21)
34,453	**473,417**	**188,093**	**56,129**	**1,357,455**	**(22)**
3,062	105,178	0	13,247	233,706	(23)
5,956	76,604	183,025	2,202	330,481	(24)
13,209	137,586	738	13,000	322,641	(25)
6,760	61,405	1,691	10,019	169,978	(26)
378	36,661	2,639	5,519	81,281	(27)
5,088	55,983	0	12,142	219,368	(28)
56,719	**417,542**	**7,329**	**49,288**	**2,589,956**	**(29)**
5,556	67,379	332	18,285	1,017,665	(30)
1,702	167,529	2,949	9,538	473,754	(31)
35,603	103,113	1,799	17,361	767,438	(32)
13,858	79,521	2,249	4,104	331,099	(33)
55,024	**133,252**	**6,208**	**40,832**	**702,180**	**(34)**
8,205	46,424	1,501	16,865	235,991	(35)
32,552	62,609	2,269	14,902	299,719	(36)
7,521	19,787	2,299	6,898	114,562	(37)
3,723	2,105	15	2,128	26,800	(38)
3,023	2,327	124	39	25,108	(39)
31,194	**286,503**	**18,286**	**73,205**	**1,144,666**	**(40)**
20,356	147,042	10,754	40,125	378,032	(41)
7,568	34,052	1,357	8,495	252,603	(42)
3,270	105,409	6,175	24,585	514,031	(43)
34,990	**1,157,251**	**593,899**	**172,547**	**4,941,029**	**(44)**
4,417	14,510	6,511	12,595	246,290	(45)
194	355,539	187,830	44,623	1,248,196	(46)
425	54,518	41,973	26,319	223,253	(47)
29,954	732,684	357,585	89,010	3,223,290	(48)
19,305	**56,776**	**7,890**	**12,543**	**391,984**	**(49)**
12,740	14,613	7,872	8,391	207,084	(50)
310	9,132	18	1,803	43,791	(51)
5,422	25,017	0	406	104,353	(52)
833	8,014	0	1,943	36,756	(53)
46,366	**476,793**	**559,347**	**101,221**	**2,341,008**	**(54)**
5,873	9,099	23,602	9,676	152,878	(55)
36,469	458,033	532,128	72,128	2,007,763	(56)
0	0	0	1,939	73,366	(57)
4,024	9,661	3,617	17,478	107,001	(58)
11,150	**96,067**	**21,874**	**2,139**	**310,702**	**(59)**
30	1,672	0	205	41,313	(60)
354	36,594	13,543	576	102,667	(61)
10,766	57,801	8,331	1,358	166,722	(62)
406	**76,085**	**2,145**	**198**	**146,670**	**(63)**
0	76,085	2,145	126	143,211	(64)
406	0	0	72	3,459	(65)

1989
TOTAL COMMERCIAL CONSUMPTION BY STANDARD INDUSTRIAL CLASSIFICATION

(Millions of Cubic Feet)[a]

Group	Description	Region[b]			
		1	2	3	4
01–09	Agriculture, Forestry & Fishing	227	4,812	721	8,058
10–14	Mining	17	302	41	131
15–17	Construction	822	4,547	307	3,728
20–39	Manufacturing	4,151	41,256	2,647	27,992
40–48	Transportation	2,697	19,758	2,225	12,120
49	Other Utility Services	1,273	7,976	897	11,793
50–51	Wholesale Trade	3,113	13,377	1,437	14,448
52–57,59	Retail Trade	8,097	42,926	3,535	33,164
58	Restaurants	8,498	34,814	2,600	23,080
60–64,66,67	Finance & Insurance	1,810	8,010	644	5,876
65	Real Estate (Apartments)	19,338	76,480	3,432	56,277
70	Hotels & Other Lodging	2,958	15,310	3,019	12,921
72–79	Services	6,021	35,492	5,941	29,390
80	Health Services, Hospitals	7,430	56,513	19,135	40,775
81,83,84	Legal & Social Services	799	5,809	651	3,993
82	Education (Schools)	7,353	60,357	12,328	66,964
86,88,89	Membership Organizations	3,234	36,180	2,732	22,623
91–97	Public Administration	3,374	30,807	10,110	20,576
99	Non-Classifiable	771	12,766	5,931	1,380
	Not Classified or Unreported	29,142	218,849	130,862	164,880
	Total Consumption	**111,125**	**726,341**	**209,195**	**560,169**

a. Btu content equals 1,000 Btu per cubic foot.
b. For region definition see previous table on page 208.

1989 (continued)
TOTAL COMMERCIAL CONSUMPTION BY STANDARD INDUSTRIAL CLASSIFICATION

(Millions of Cubic Feet)[a]

Region[b]								
5	6	7	8	9	10	11	Total	Group
9,345	7,421	27,729	5,650	16,452	887	0	81,302	01–09
120	46	163	395	18	45	0	1,278	10–14
1,393	466	946	1,951	1,564	651	0	16,375	15–17
2,811	9,456	3,932	169	3,915	2,425	113	98,867	20–39
4,851	1,303	3,728	5,255	7,755	1,038	0	60,730	40–48
5,453	3,343	847	2,358	74,191	2,922	254	111,307	49
4,340	1,377	4,816	2,919	6,237	3,430	0	55,494	50–51
16,408	2,889	8,483	8,063	7,766	4,988	0	136,319	52–57, 59
4,872	1,963	7,934	4,373	14,921	2,634	359	106,048	58
2,444	187	2,016	1,263	2,054	2,540	0	26,844	60–64, 66, 67
15,783	4,456	17,724	17,286	8,993	2,688	597	223,054	65
3,280	1,100	4,254	3,576	14,999	3,833	1,417	66,667	70
7,143	1,720	9,613	6,695	26,344	3,889	0	132,248	72–79
12,387	19,554	11,209	5,918	24,249	3,960	144	201,274	80
1,538	293	1,854	697	2,693	2,780	0	21,107	81, 83, 84
18,787	7,322	19,882	11,156	27,242	5,223	167	236,781	82
5,959	656	4,626	4,021	3,845	1,801	0	85,677	86, 88, 89
6,711	3,895	13,177	6,526	33,620	3,643	0	132,439	91–97
1,792	0	3,949	10,909	4,225	631	0	42,354	99
72,116	84,879	126,783	16,879	101,645	17,724	15,598	979,357	
197,533	**152,326**	**273,665**	**116,058**	**382,728**	**67,732**	**18,649**	**2,815,521**	

1989
TOTAL INDUSTRIAL CONSUMPTION BY STANDARD INDUSTRIAL CLASSIFICATION

(Millions of Cubic Feet)[a]

Group	Description	Region[b]			
		1	2	3	4
01–09	Agriculture, Forestry	589	1,032	400	1,830
10–14	Mining	1,443	951	3,685	4,548
15–17	Construction	477	1,558	466	2,326
20	Food Products	3,407	54,872	33,041	74,993
21	Tobacco Products	92	1,618	1,050	73
21	Textile Mills	3,620	8,481	55,124	1,664
23	Apparel	95	2,847	4,010	526
24	Wood Products	48	3,650	5,299	4,063
25	Furniture	188	4,989	1,804	4,239
26	Paper Products	3,805	40,289	65,341	61,419
27	Printing & Publishing	809	7,904	2,017	7,691
28	Chemicals	3,155	105,950	112,016	63,163
29	Petroleum	539	23,193	15,174	25,751
30	Rubber Plastics	1,422	17,318	12,097	14,960
31	Leather Products	203	3,380	36	1,452
32	Stone, Clay, Glass	4,432	78,028	72,346	41,778
331–332	Iron & Steel	1,950	181,389	30,124	179,985
333–339	Nonferrous Metals	1,880	48,457	20,065	26,846
34	Fabricated Metal	5,651	37,914	11,179	41,800
35	Machinery	3,092	22,685	4,718	32,783
36	Electric Equipment	2,992	29,016	5,963	13,420
37	Transportation Equipment	1,828	30,764	8,851	47,419
38	Instruments	1,552	4,484	1,521	1,808
39	Other Manufacturing	1,223	8,847	2,085	14,482
40–48	Transportation	174	28,327	121	3,653
49	Other Utility Services	2,638	18,405	1,343	2,079
	Not Classified/Unreported	15,893	112,405	132,306	142,871
	Total Consumption	**63,197**	**878,753**	**602,182**	**817,622**

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a. Btu content equals 1,000 Btu per cubic foot.

b. For region definition see previous table on page 208.

1989 (continued)
TOTAL INDUSTRIAL CONSUMPTION BY STANDARD INDUSTRIAL CLASSIFICATION

(Millions of Cubic Feet)[a]

Region[b]								
5	6	7	8	9	10	11	Total	Group
1,048	1,970	8,702	984	722	1,200	0	18,477	01–09
504	13,318	53,287	2,685	169,298	978	0	250,697	10–14
7,982	4,260	1,693	1,253	871	111	0	20,997	15–17
37,088	7,317	36,088	11,501	68,595	25,369	0	352,271	20
66	0	150	5	3	0	0	3,057	21
116	332	1,170	49	7,295	220	0	78,071	21
158	66	1,439	126	255	110	0	9,632	23
2,948	8,041	20,996	165	2,861	6,539	0	54,610	24
419	151	1,144	137	636	81	0	13,788	25
8,821	1,874	97,344	4,791	42,603	42,438	0	368,725	26
1,246	21,627	12,617	285	3,125	314	0	57,635	27
22,159	134,963	1,250,711	10,065	41,238	17,738	42,278	1,803,436	28
2,418	46,355	419,762	13,752	98,602	11,777	0	657,323	29
1,709	3,472	8,052	1,347	4,064	370	0	64,811	30
203	1,375	212	21	1,090	16	0	7,988	31
7,417	21,163	42,063	5,364	47,785	6,951	0	327,327	32
6,396	2,110	14,580	13,130	9,056	4,605	0	443,325	331–332
2,212	5,770	68,691	8,616	33,172	11,269	0	226,978	333–339
3,660	3,528	21,651	995	10,714	1,279	0	138,371	34
4,982	370	3,542	1,536	5,181	1,743	1,980	82,612	35
1,743	6,507	5,676	678	8,922	361	0	75,278	36
1,122	5,413	7,667	2,858	12,627	4,874	0	123,423	37
820	13	4,486	1,244	895	518	0	17,341	38
603	7,420	11,226	219	3,412	1,600	0	51,117	39
220	5,465	7,618	138	838	408	0	46,962	40–48
1,077	11,552	46,446	0	0	0	0	83,540	49
77,950	108,477	611,881	2,660	51,263	6,541	34,587	1,296,834	
195,087	**422,909**	**2,758,894**	**84,604**	**625,123**	**147,410**	**78,845**	**6,674,626**	

UNITED STATES GAS CONSUMPTION BY CLASS OF SERVICE, 1976–1989

(Millions of Cubic Feet)[a]

	Firm				Interruptible						
Year	Residential	Commercial	Industrial	Electric Utilities	Commercial	Industrial	Electric Utilities	Other	Total Excluding Field Use	Field Use	Total Consumption
1976	5,090,126	2,536,585	5,334,144	2,106,027	270,359	1,846,102	956,247	1,243,448	19,383,038	1,667,000	21,050,038
1977	4,909,373	2,463,206	5,019,752	2,017,471	222,735	1,651,440	998,913	1,167,724	18,450,614	1,694,000	20,144,614
1978	5,132,207	2,746,861	6,486,614	2,926,048	b	b	b	1,304,150	18,595,880	1,679,000	20,274,880
1979	5,144,003	2,770,674	6,973,202	3,274,967	b	b	b	1,233,424	19,396,270	1,530,000	20,926,270
1980	4,868,509	2,363,209	5,167,578	2,161,516	247,205	1,967,741	1,430,447	1,354,737	19,560,942	1,053,000	20,613,942
1981	4,654,258	2,240,388	5,026,609	2,142,754	249,760	2,001,333	1,632,357	1,350,019	19,297,478	953,000	20,250,478
1982	4,708,934	2,303,029	4,045,749	1,927,775	270,952	1,655,883	1,346,773	1,141,246	17,400,341	1,140,000	18,540,341
1983	4,429,538	2,179,757	3,763,706	1,721,185	258,656	1,903,910	1,294,767	1,180,978	16,732,497	1,009,000	17,741,497
1984	4,632,219	2,297,317	3,861,396	1,683,711	291,848	2,097,198	1,515,668	960,594	17,339,951	1,110,000	18,449,951
1985	4,559,026	2,255,642	3,845,440	1,616,996	302,322	2,154,120	1,567,307	1,071,271	17,372,124	1,051,000	18,423,124
1986	4,427,780	2,190,161	3,414,110	1,623,445	324,072	2,049,168	1,238,241	1,112,099	16,379,076	972,000	17,351,076
1987	4,407,617	2,193,420	3,204,744	1,334,910	357,314	2,792,118	1,587,153	991,156	16,868,432	972,000	17,840,432
1988	4,711,724	2,321,364	2,804,233	1,113,494	438,018	5,087,818	1,570,155	780,755	17,257,406	1,192,000	18,449,406
1989	4,802,585	2,381,841	3,000,831	1,134,655	433,680	3,673,795	1,711,865	684,655	17,823,907	1,220,000	19,043,907

a. Btu content equals 1,000 Btu per cubic foot.

b. In 1978 and 1979, firm and interruptible service were not measured individually; therefore all consumption is included under firm for each class of service.

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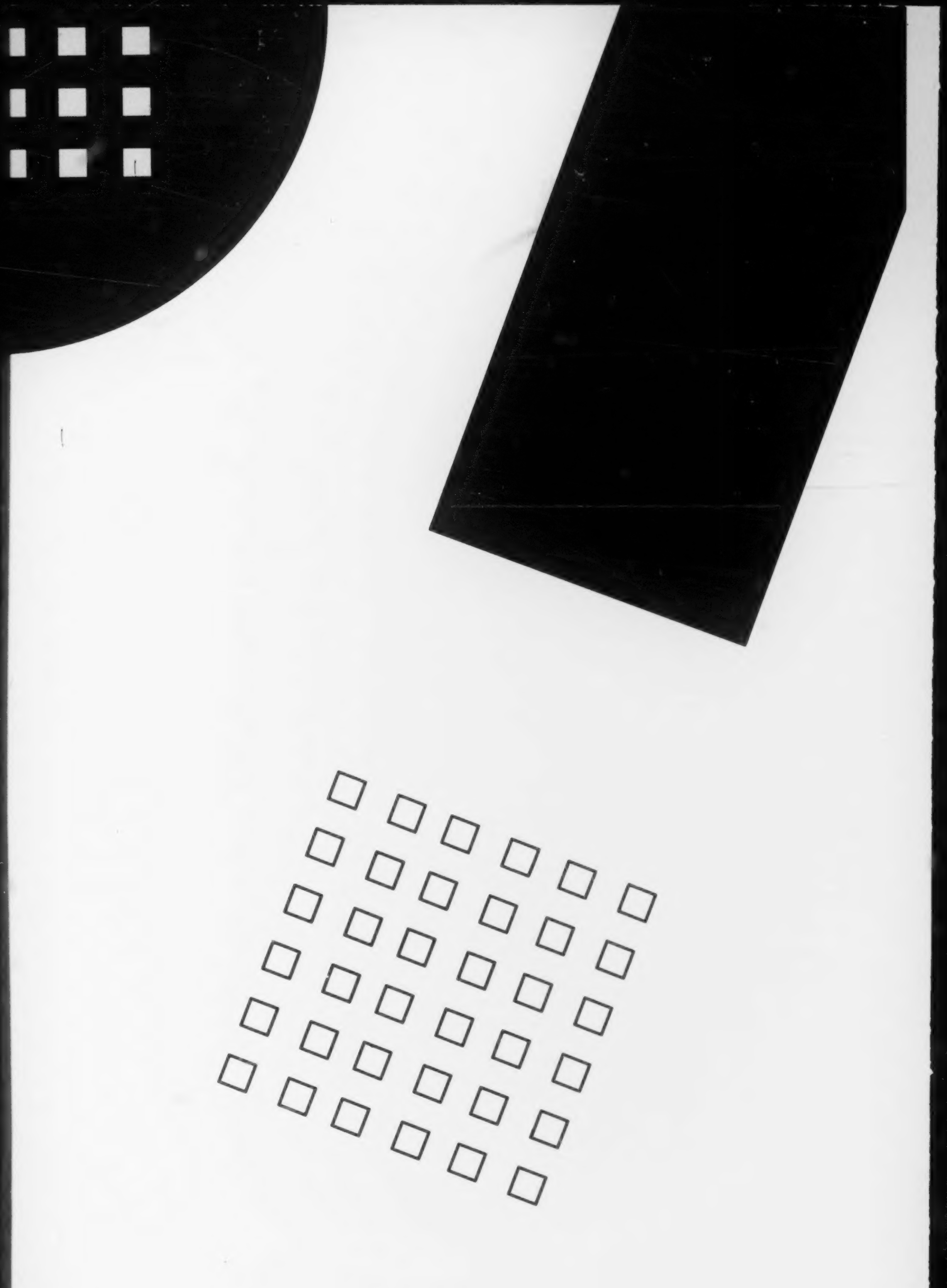

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